U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
PB80-130727

Screening/Flotation Treatment of Combined Sewer Overflows. Volume II: Full-Scale Operation Racine, Wisconsin. Appendices

Envirex, Inc, Milwaukee, WI

Prepared for

Municipal Environmental Research Lab, Cincinnati, OH

Dec 79

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO.	2.	3. RE PB80-130727
EPA-600/2-79-106b		

4. TITLE AND SUBTITLE	5. REPORT DATE
SCREENING/FLOTATION TREATMENT OF COMBINED SEWER OVERFLOWS Volume II: Full-Scale Operation, Racine, Wisconsin APPENDICES	December 1979 (Issuing Date)
	6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
T. L. Meinholz, D. A. Gruber, R. A. Race, C. A. Hansen, J. H. Moser, and M. J. Clark	
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT NO.
Envirex Inc. (A Rexnord Company) Environmental Sciences Division Post Office Box 2022 Milwaukee, Wisconsin 53201	1BC822, SOS 1, Task 14
	11. CONTRACT/GRANT NO.
	S-800744
12. SPONSORING AGENCY NAME AND ADDRESS	13. TYPE OF REPORT AND PERIOD COVERED
Municipal Environmental Research Laboratory--Cin.,OH Office of Research and Development U.S. Environmental Protection Agency Cincinnati, Ohio 45268	Final
	14. SPONSORING AGENCY CODE
	EPA/600/14

15. SUPPLEMENTARY NOTES
Project Officer: Anthony N. Tafuri (201) 321-6679, FTS 340-6679.
See also main report, Volume II, EPA-600/2-79-106a.

16. ABSTRACT

This study involved the planning, design, construction and operation of a two-year evaluation period, of three full-scale demonstration systems for the treatment of storm generated discharges. As part of the evaluation, the quality of the receiving body was also monitored. Two of the systems, located at two major points of combined sewer overflow to the Root River in Racine, Wisconsin, employed screening/dissolved-air flotation to treat the overflow prior to discharge. The two systems had a combined capacity of 222,000 cu m/day (58.5 mgd). The third system utilized screening only for the treatment of urban stormwater, having a capacity of 14,800 cu m/day (3.9 mgd).

Results indicated that the "satellite plant" concept of locating treatment plants at points of combined sewer overflow discharge is a feasible alternative to combined sewer separation. Based on the operating results of these systems, removal efficiencies of 60 to 75 percent can be expected for suspended solids and 50 to 65 percent for BOD. The chlorination system met the fecal coliform standard for the whole body contact specified by the State of Wisconsin for the Root River. It was concluded that the operation of the treatment systems had a beneficial effect on the quality of the River.

Results from the screening of urban stormwater indicated that this method would remove 50 percent of the suspended solids and 20 percent of the BOD.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
*Combined sewers, *Overflows--sewers, *Waste treatment, Sewage treatment, Sewage, Waste water, Mathematical models	Screening/flotation treatment, Dissolved air flotation, Stormwater runoff, Urban hydrologic models, Combined sewers overflows	13B

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(This Report)*	21. NO. OF PAGES
RELEASE TO PUBLIC	UNCLASSIFIED	325
	20. SECURITY CLASS *(This page)* UNCLASSIFIED	22. PRICE

EPA Form 2220-1 (Rev. 4-77)

EPA-600/2-79-106b
December 1979

SCREENING/FLOTATION TREATMENT OF COMBINED SEWER OVERFLOWS

Volume II: Full-Scale Operation Racine, Wisconsin

APPENDICES

by

T. L. Meinholz, D. A. Gruber, R. A. Race,
C. A. Hansen, J. H. Moser, and M. J. Clark
Envirex Inc.
A Rexnord Company
Environmental Sciences Division
Milwaukee, Wisconsin 53201

Grant No. S800744

Project Officers

Anthony N. Tafuri
Storm and Combined Sewer Section
Wastewater Research Division
Municipal Environmental Research Laboratory (Cincinnati)
Edison, New Jersey 08817

and

Clifford Risley
Great Lakes Region V
U.S. Environmental Protection Agency
Chicago, Illinois 60606

MUNICIPAL ENVIRONMENTAL RESEARCH LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
CINCINNATI, OHIO 45268

BEGIN FIRST LINE OF TEXT HERE
TYPING GUIDE SHEET
CENTER OF PAGE
TOP OF IMAGE AREA
DROPPED HEAD: BEGIN SECTIONS HERE
6-1/2"
9-1/8"
BEGIN LAST LINE OF TEXT
BOTTOM OF IMAGE AREA OUTSIDE DIMENSION FOR TABLES AND ILLUSTRATIONS
3/8"
PAGE NUMBER
EPA-287 (Cin.)
(4-76)

DISCLAIMER

This report has been reviewed by the Municipal Environmental Research Laboratory, U.S. Environmental Protection Agency, and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the U.S. Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

TYPING GUIDE SHEET
BEGIN FIRST LINE OF TEXT HERE
CENTER OF PAGE
TOP OF IMAGE AREA
DROPPED HEAD: BEGIN SECTIONS HERE

FOREWORD

The Environmental Protection Agency was created because of increasing public and government concern about the dangers of pollution to the health and welfare of the American people. Noxious air, foul water, and spoiled land are tragic testimony to the deterioration of our natural environment. The complexity of that environment and the interplay between its components require a concentrated and integrated attack on the problem.

Research and development is that necessary first step in problem solution and it involves defining the problems, measuring its impact, and searching for solutions. The Municipal Environmental Research Laboratory develops new and improved technology and systems for the prevention, treatment, and management of wastewater and solid and hazardous waste pollutant discharges from municipal and community sources, for the preservation and treatment of public drinking water supplies, and to minimize the adverse economic, social, health, and aesthetic effects of pollution. This publication is one of the products of that research; a most vital communications link between the researcher and the user community.

This report describes the planning, design and construction and the operation over a two-year evaluation period of three full-scale demonatration systems for the treatment of storm generated discharges using the screening/flotation principle.

Francis T. Mayo
Director
Municipal Environmental
Research Laboratory

BEGIN LAST LINE OF TEXT
BOTTOM OF IMAGE AREA OUTSIDE DIMENSION FOR TABLES AND ILLUSTRATIONS
3/8"

EPA 287 (Cin.)
(4-76)

BEGIN FIRST LINE OF TEXT HERE
TYPING GUIDE SHEET
CENTER OF PAGE
TOP OF IMAGE AREA
DROPPED HEAD: BEGIN SECTIONS HERE

ABSTRACT

This report describes the planning, design and construction and the operation over a two-year evaluation period, of three full-scale demonstration systems for the treatment of storm generated discharges. As part of the evaluation, the quality of the receiving body was also monitored. Two of the systems - located at two major points of combined sewer overflow to the Root River in Racine, Wisconsin - are identical in concept and employ screening/dissolved-air flotation to treat the overflow prior to discharge. The two systems have a combined capacity of 222,000 cu m/day (58.5 mgd). The third system utilizes screening only for the treatment of urban stormwater. It has a capacity of 14,800 cu m/day (3.9 mgd).

This report also describes the verification and modification of the EPA Storm Water Management Model using the subject drainage area, sewerage and treatment systems, and receiving body.

Results from the evaluation program indicate that the "satellite plant" concept of locating treatment plants at points of combined sewer overflow discharge is a feasible alternative to combined sewer separation. Based on the operating results for these systems, removal efficiences of 60 to 75 percent can be expected for suspended solids and 50 to 65 percent for BOD. The chlorination system met the fecal coliform standard for whole body contact specified by the State of Wisconsin for the Root River. It was concluded that the operation of the treatment systems had a beneficial effect on the quality of the River.

Results from the screening of urban stormwater indicate that this method will remove 50 percent of the suspended solids and 20 percent of the BOD.

This report was submitted in fulfillment of Contract No. S800744 (formerly 11023 FWS) under the partial sponsorship of the Environmental Protection Agency. The study program associated with this project was performed by Envirex Inc. acting as a subcontractor to the grantee, the City of Racine. Work was completed as of November 1974.

BEGIN LAST LINE OF TEXT
BOTTOM OF IMAGE AREA OUTSIDE DIMENSION FOR TABLES AND ILLUSTRATIONS
3/8"

EPA-287 (Cin.)
(4-76)

TABLE OF CONTENTS

		Page Number
ABSTRACT		iv
TABLE OF CONTENTS		v
ACKNOWLEDGEMENTS		vi
SECTIONS		
VIII	APPENDICES	
	IV-A Pretreatment Discharge Quality	358
	IV-B Demonstration System Costs	370
	IV-C Site Operational Parameters	374
	IV-D Analytical Results for System Operation	420
	IV-E Description of Analytical Techniques	466
	IV-F Site Treatment/Bypass Volumes - May to Sept., 1974	470
	IV-G Pollutional Mass Removals Achieved by Treatment Sites	476
	IV-H Total Pollutional Mass Removals from Combined Sewer Overflow Volumes	501
	V-A Root River Quality Data	514
	VI-A Runoff Block Data	622
	VI-B Transport Block Data	633
	VI-C Storage Block Data	648
	VI-D Receive Block Data	652
	VI-E Rainfall Intensities	656
	VI-F Remaining CSO Area Data	670

BEGIN FIRST LINE OF TEXT HERE
TYPING GUIDE SHEET
CENTER OF PAGE
TOP OF IMAGE AREA
DROPPED HEAD; BEGIN SECTIONS HERE

ACKNOWLEDGEMENTS

Many persons from the Environmental Sciences Division of Envirex Inc. contributed to the successful completion of this study.

Mechanical design and subsequent start-up of the treatment facilities were carried out by the Design section headed by Joseph E. Milanowski.

Field operation of the treatment units during more than fifty storm events, quickly responded to at all hours of the day and night, was performed by such dedicated individuals as John Moser, Michael Clark, Richard Race, David Gruber and Thomas Meinholz.

Timely completion of the laboratory analyses for the storm events over the two year monitoring period was achieved consistently by Richard E. Wullschleger and his laboratory staff.

The cooperation of the City of Racine in the day to day operation and maintenance of the treatment facilities is duly recognized.

Deep appreciation is extended to the U.S. Environmental Protection Agency, especially Project Officers Stephen Poloncsik and Clifford Risley of Region V and Messrs. Anthony Tafuri, Staff Engineer, and Richard Field, Chief, Storm and Combined Sewer Section, Edison, NJ, Frank Condon and William Rosenkranz, Washington, DC for their continued aid and helpful advice during the project.

9-1/8"
BEGIN LAST LINE OF TEXT
BOTTOM OF IMAGE AREA OUTSIDE DIMENSION FOR TABLES AND ILLUSTRATIONS
3/8"

PAGE NUMBER
EPA-267 (Cin.)
(4-76)

APPENDIX IV-A
PRETREATMENT DISCHARGE QUALITY

Table A1. DISCHARGE WATER QUALITY
STORM 003, 7/16/71, 9:15 pm

Over-flow No.	Parameter	Units Counts	10 min	20 min	30 min	40 min	50 min	60 min	120 min
5	Ortho Phosphate (P)	mg/l	2.19	1.14	1.33	1.39	2.36	3.67	1.22
1	Ortho Phosphate (P)	mg/l							0
5	pH		6.8	6.7	6.9	7.1	7.2	7.15	6.9
1	pH								7.4
5	BOD	mg/l	213	126	163	106	86	113	309
1	BOD	mg/l							93
5	Total Solids	mg/l	1869	998	988	990	617	721	2932
1	Total Solids	mg/l							669
5	Suspended Solids	mg/l	1196	508	676	637	218	220	1220
1	Suspended Solids	mg/l							351
5	Dissolved Solids	mg/l	673	490	312	353	399	501	1712
1	Dissolved Solids	mg/l							318

Table A2. DISCHARGE WATER QUALITY
STORM 004, 7/23/71, 8:40 pm

Over-flow No.	Parameter	Units	10 min	20 min	30 min	40 min	50 min	60 min	70 min	120 min
7-8	Fecal Coli	per 100 ml	390,000	110,000	40,000	23,000	2,370,000	250,000	52,000	
1	Fecal Coli	per 100 ml								5,000
3	Fecal Coli	per 100 ml								27,500
7-8	Ortho Phosphate	mg/l	.17	.71	.34	.61	.67	.62	.40	
1	Ortho Phosphate	mg/l								.18
3	Ortho Phosphate	mg/l								2.85
7-8	pH		6.7	6.9	7.3	7.2	6.9	6.9	6.9	
1	pH									6.9
3	pH									7.5
7-8	BOD	mg/l	59	74	92	101	124	80	87	
1	BOD	mg/l								45
3	BOD	mg/l								140
7-8	TOC	mg/l	14	78	95	89	109	83	69	
1	TOC	mg/l								81
3	TOC	mg/l								128
7-8	BOD/TOC		.8	.95	.97	1.1	1.13	.96	1.26	
1	BOD/TOC									.56
3	BOD/TOC									1.09
7-8	Total Solids	mg/l	660	666	732	751	325	658	558	
1	Total Solids	mg/l								418
3	Total Solids	mg/l								773
7-8	Suspended Solids	mg/l	320	414	434	442	533	404	306	
1	Suspended Solids	mg/l								170
3	Suspended Solids	mg/l								366
7-8	Dissolved Solids	mg/l	340	252	298	309	292	254	252	
1	Dissolved Solids	mg/l								248
3	Dissolved Solids	mg/l								407

Table A3. DISCHARGE WATER QUALITY
STORM 005, 8/2/71, 3:30 pm

Over-flow No.	Parameter	Units	10 min	20 min	30 min	40 min	50 min	60 min	90 min	120 min	Composite
1	Fecal Coli	per 100 ml									2,000
3	Fecal Coli	per 100 ml									16,000
7-8	Fecal Coli	per 100 ml	16,300	27,000	16,000	18,000	300	750	4,950	220	
1	Ortho Phosphate	mg/l									.3
3	Ortho Phosphate	mg/l									1.1
7-8	Ortho Phosphate	mg/l	1.9	2	.9	.4	.4	.3	.4	1.0	
1	pH										7.5
3	pH										6.9
7-8	pH		6.5	6.5	6.7	6.7	6.7	6.7	6.9	7.35	
1	BOD	mg/l									38
3	BOD	mg/l									190
7-8	BOD	mg/l	586	500	223	222	109	157	135	39	
1	TOC	mg/l									52.5
3	TOC	mg/l									209.5
7-8	TOC	mg/l	257	230	253.5	121.5	121	143.5	69	81.5	
1	BOD/TOC										.72
3	BOD/TOC										.91
7-8	BOD/TOC		2.28	2.1	.87	1.8	.85	1.1	1.9	.48	
1	Total Solids	mg/l									308
3	Total Solids	mg/l									1,071
7-8	Total Solids	mg/l	1,972	1,331	747	626	483	562	403	261	
1	Suspended Solids	mg/l									109
3	Suspended Solids	mg/l									527
7-8	Suspended Solids	mg/l	1,416	904	505	479	414	422	273	53	
1	Dissolved Solids	mg/l									199
3	Dissolved Solids	mg/l									544
7-8	Dissolved Solids	mg/l	556	427	242	247	69	140	230	208	

Table A4. DISCHARGE WATER QUALITY
STORM 006, 8/10/71, 2:45 pm

Overflow No.	Parameter	Units	10 min	20 min	30 min	60 min	90 min	120 min	240 min	Composite
1	Fecal Coli	per 100 ml								3200
3	Fecal Coli	per 100 ml								12300
5	Fecal Coli	per 100 ml								100
7-8	Fecal Coli	per 100 ml	15300	5150	695	25300	22100	15500	89000	
1	Ortho Phosphate	mg/l								.75
3	Ortho Phosphate	mg/l								2.49
5	Ortho Phosphate	mg/l								0
7-8	Ortho Phosphate	mg/l	.99	.26	.23	.17	.20	.34	.20	
1	pH									6.9
3	pH									6.9
5	pH									7.2
7-8	pH		6.45	7.1	6.85	6.85	6.85	7.0	7.05	
1	BOD	mg/l								71
3	BOD	mg/l								208
5	BOD	mg/l								29
7-8	BOD	mg/l	301	107	66	91	97	71	81	
1	TOC	mg/l								88
3	TOC	mg/l								166
5	TOC	mg/l								55
7-8	TOC	mg/l	360	77	119	47	36	28	43	

Table A5. DISCHARGE WATER QUALITY
STORM 007, 8/23/71

Overflow No.	Parameter	Units	Composite
1	Fecal Coli	per 100 ml	67000
3	Fecal Coli	per 100 ml	13000
5	Fecal Coli	per 100 ml	417
7-8	Fecal Coli	per 100 ml	1100
1	O Phosphate	mg/l	.51
3	O Phosphate	mg/l	3.0
5	O Phosphate	mg/	.05
7-8	O Phosphate	mg/l	.41
1	pH		7.25
3	pH		7.15
5	pH		7.05
7-8	pH		7.25
1	BOD	mg/l	70
3	BOD	mg/l	151
5	BOD	mg/l	.2
7-8	BOD	mg/l	54
1	TOC	mg/l	72
3	TOC	mg/l	110
5	TOC	mg/l	36
7-8	TOC	mg/l	58
1	BOD/TOC		.97
3	BOD/TOC		1.37
5	BOD/TOC		.33
7-8	BOD/TOC		.93
1	Total Solids	mg/l	480
3	Total Solids	mg/l	999
5	Total Solids	mg/l	444
7-8	Total Solids	mg/l	623
1	Suspended Solids	mg/l	318
3	Suspended Solids	mg/l	687
5	Suspended Solids	mg/l	425
7-8	Suspended Solids	mg/l	384
1	Dissolved Solids	mg/l	162
3	Dissolved Solids	mg/l	312
5	Dissolved Solids	mg/l	19
7-8	Dissolved Solids	mg/l	239

Table A6. DISCHARGE WATER QUALITY
STORM 008, 9/20/71, 5:40 am

Overflow No.	Parameter	Units Counts	10 min.	20 min.	30 min.	60 min.	90 min.	120 min.	180 min.	240 min.	Comp
1	Fecal Coli	per 100 ml									3700
3	Fecal Coli										25000
5	Fecal Coli										1
7-8	Fecal Coli		1700	6700	10000	8300	4400	5700	7300	14000	
1	Ortho Phosphate	mg/l									.68
3	" "	mg/l									1.12
5	" "	mg/l									.06
7-8	" "	mg/l	2.64	6.4	7.5	4.56	3.67	4.32	3.5	2.77	
1	pH										7.3
3	pH										7.25
5	pH										7.0
7-8	pH		7.25	7.4	7.5	7.1	7.4	7.35	7.35	7.35	
1	BOD	mg/l									73
3	BOD	mg/l									155
5	BOD	mg/l									12
7-8	BOD	mg/l	83	62	66	73	39	45	30	35	
1	TOC	mg/l									84
3	TOC	mg/l									173
5	TOC	mg/l									37
7-8	TOC	mg/l	22	53	64	64	32	43	32	35	
1	BOD/TOC										.87
3	BOD/TOC										.90
5	BOD/TOC										.22
7-8	BOD/TOC		3.77	1.17	1.04	1.14	1.21	1.04	.93	10	
1	Total Solids	mg/l									381
3	Total Solids	mg/l									619
5	Total Solids	mg/l									493
7-8	Total Solids	mg/l	651	573	614	680	585	758	578	609	
1	Suspended Solids	mg/l									194
3	Suspended Solids	mg/l									384
5	Suspended Solids	mg/l									365
7-8	Suspended Solids	mg/l	241	132	121	217	135	173	128	145	

Table A7. DISCHARGE WATER QUALITY
STORM 009, 9/27/71, 12:10 am

Overflow No.	Parameter	Counts	10 min.	30 min.	60 min.	120 min.	240 min.	Composite
1	Fecal Coli	per 100 ml						2600
3	Fecal Coli	per 100 ml						5200
5	Fecal Coli	per 100 ml						20
7-8	Fecal Coli	per 100 ml	1700	6600	19000	10000	6200	
1	Ortho Phosphate	mg/l						1.2
3	Ortho Phosphate	mg/l						2.3
5	Ortho Phosphate	mg/l						.28
7-8	Ortho Phosphate	mg/l	.4	.57	.24	.2	.2	
1	pH							7.15
3	pH							7.15
5	pH							7.6
7-8	pH		6.95	6.95	6.85	7.0	7.4	
1	BOD	mg/l						152
3	BOD	mg/l						406
5	BOD	mg/l						10
7-8	BOD	mg/l	122	156	119	70	36	
1	TOC	mg/l						188
3	TOC	mg/l						340
5	TOC	mg/l						.24
7-8	TOC	mg/l	110	146	56	85	42	
1	BOD/TOC							.8
3	BOD/TOC							1.19
5	BOD/TOC							.24
7-8	BOD/TOC		1.11	1.06	2.1	.82	.85	
1	Total Solids	mg/l						923
3	Total Solids	mg/l						1649
5	Total Solids	mg/l						628
7-8	Total Solids	mg/l	1097	1183	996	619	390	
1	Suspended Solids	mg/l						596
3	Suspended Solids	mg/l						1506
5	Suspended Solids	mg/l						587
7-8	Suspended Solids	mg/l	552	1076	949	545	209	
1	Dissolved Solids	mg/l						327
3	Dissolved Solids	mg/l						143
5	Dissolved Solids	mg/l						
7-8	Dissolved Solids	mg/l	545	107	47	74	181	

Table A8. DISCHARGE WATER QUALITY

No.	Parameter	Counts	0 min.	20 min.	40 min.	60 min.	120 min	240 min.	Composite
1	Fecal Coli	per 100 ml							1,300,000
3									2,170,000
7-8			130,000	500,000	210,000	42,000	60,000	140,000	
1	Ortho Phosphate	mg/l							.32
3	Ortho Phosphate	mg/l							1.3
7-8	Ortho Phosphate	mg/l	.44	.4	.63	.32	.97	.34	
1	pH								7.35
3	pH								7.35
7-8	pH		7.3	7.45	7.6	7.85	7.95	7.7	
1	BOD	mg/l							52
3	BOD	mg/l							170
7-8	BOD	mg/l	71		39	28	40	87	
1	TOC	mg/l							92
3	TOC	mg/l							128
7-8	TOC	mg/l	77	46	32	22	40	96	
1	BOD/TOC								.57
3	BOD/TOC								1.33
7-8	BOD/TOC		.92	.96	1.22	1.27	1	.9	
1	Total Solids	mg/l							442
3	Total Solids	mg/l							658
7-8	Total Solids	mg/l	751	478	359	313	463	624	
1	Suspended Solids	mg/l							266
3	Suspended Solids	mg/l							428
7-8	Suspended Solids	mg/l	460	242	121	68	206	506	
1	Dissolved Solids	mg/l							176
3	Dissolved Solids	mg/l							230
7-8	Dissolved Solids	mg/l	291	236	238	245	257	118	

Table A9. DISCHARGE WATER QUALITY
STORM 011, 11/1/71, 11:50 pm

Overflow No.	Parameter	Units	0-20 min.	20-40 min.	40-60 min.	60-120 min.	Composite
1	Fecal Coli	counts per					2400
3	Fecal Coli	100 ml					1000
5	Fecal Coli						8
7-8	Fecal Coli		2900	1000	180	160	
1	Ortho Phosphate	mg/l					1.12
3	Ortho Phosphate	mg/l					2.03
5	Ortho Phosphate	mg/l					.04
7-8	Ortho Phosphate	mg/l	.22	.43	.24	.25	
1	pH						6.9
3	pH						6.95
5	pH						7.1
7-8	pH		7.15	7.2	7.5	7.6	
1	BOD	mg/l					145
3	BOD	mg/l					232
5	BOD	mg/l					26
7-8	BOD	mg/l	37	107	26	20	
1	TOC	mg/l					203
3	TOC	mg/l					224
5	TOC	mg/l					84
7-8	TOC	mg/l	33	70	23	18	
1	BOD/TOC						.71
3	BOD/TOC						1.04
5	BOD/TOC						.31
7-8	Total Solids	mg/l	1.12	1.52	1.13	1.11	1062
1	Total Solids	mg/l					1145
3	Total Solids	mg/l					691
7-8	Total Solids	mg/l	362	621	297	286	
1	Suspended Solids	mg/l					499
3	Suspended Solids	mg/l					881
5	Suspended Solids	mg/l					563
7-8	Suspended Solids	mg/l	261	286	107	69	
1	Dissolved Solids	mg/l					563
3	Dissolved Solids	mg/l					264
5	Dissolved Solids	mg/l					128
7-8	Dissolved Solids	mg/l	101	335	190	217	

Table A9. (continued). DISCHARGE WATER QUALITY
STORM 011, 11/1/71, 11:50 pm

Parameter	Units	0-20 min	20-40 min	40-60 min	61-120 min	Composite
Kjeldahl (N)	mg/l					13.8
"	"					23.8
"	"					5.4
"	"	6.7	.47	0	1.84	
Ammonia (N)	mg/l					2.35
	"					6.87
	"					.24
	"	.28	1.86	.7	.68	
NO_3	mg/l					.44
NO_3	"					.69
NO_3	"					1.04
NO_3	"	1.01	.48	1.55	1.44	
NO_2	mg/l					.11
NO_2	"					.01
NO_2	"					.06
NO_2	"	.04	.08	.05	.06	
Total Phosphorus as (P)	mg/l					5.7
"	"					8.15
"	"					.6
"	"	1.17	2.15	.84	.69	
Fecal Strep	counts/					810,000
" "	100 ml					1,600,000
" "	"					1,100
" "	"	210,000	410,000	100,000	64,000	
Conductivity	micromhos/cm					204
"	"					358
"	"					240
"	"	138	440	240	320	

Table A10. DISCHARGE WATER QUALITY
STORM 012, 11/18/71

Overflow No.	Parameter	Units	0-12 hrs.
1	Fecal Coli	counts per 100 ml	20,000
3	Fecal Coli	"	58,000
7-8	Fecal Coli	"	53,000
1	Orthophosphate	mg/l	.79
3	Orthophosphate	mg/l	3.0
7-8	Orthophosphate	mg/l	.84
1	pH		7.4
3	pH		7.1
7-8	pH		7.1
1	BOD	mg/l	55
3	BOD	mg/l	259
7-8	BOD	mg/l	162
1	TOC	mg/l	24
3	TOC	mg/l	264
7-8	TOC	mg/l	138
1	BOD/TOC		2.29
3	BOD/TOC		.98
7-8	BOD/TOC		1.17
1	Total Solids	mg/l	218
3	Total Solids	mg/l	982
7-8	Total Solids	mg/l	1348
1	Suspended Solids	mg/l	38
3	Suspended Solids	mg/l	631
7-8	Suspended Solids	mg/l	847
1	Dissolved Solids	mg/l	180
3	Dissolved Solids	mg/l	351
7-8	Dissolved Solids	mg/l	501

APPENDIX IV-B
DEMONSTRATION SYSTEM COSTS

CAPITAL INVESTMENT COSTS

A. General Construction

		Site I	Site II & IIA
1.	Job set-up and site clearing	2,700	7,300
2.	Concrete demolition work	2,754	7,446
3.	Excavation	15,042	40,669
4.	Dewatering	2,880	5,120
5.	Granular and sandfill	1,972	4,828
6.	Backfill	4,060	9,940
7.	Piling	23,785	--
8.	Masonry	280	720
9.	Structural concrete	51,459	132,325
10.	Insulating concrete	8,750	26,250
11.	Steel building	22,263	29,512
12.	Reinforcing steel	26,100	63,900
13.	Miscellaneous metals	10,694	26,184
14.	Metal doors	1,305	3,195
15.	Painting	8,004	19,596
16.	Fencing	3,075	4,425
17.	Lawns and planting	7,462	10,304
18.	Bituminous paving	2,333	2,428
19.	Bond	1,000	3,200
Subtotal		195,918	397,342
	Site II		386,614
	Site IIA		10,728

B. Mechanical Construction

Item	Site I	Site II	Site IIA
1. Spiral screw pumps	19,272	56,909	4,119
2. Chemical feed pumps	3,772	5,208	--
3. Chemical storage tanks	1,386	2,814	--
4. Chlorination equipment	5,800	14,200	--
5. Parshall flume liners	1,170	2,546	184
6. Sewer control gates	--	9,200	--
7. Chemical dilution water pumps	430	570	--
8. Sump pumps	532	799	--
9. Tank washdown pumps	600	584	16
10. Bar screens	16,340	21,660	--
11. Air compressors/dryers	3,450	3,941	109
12. Sludge drain valves	1,058	1,029	29
13. Valves	195	1,270	35
14. Ductile pipe and fittings	1,430	9,570	--
15. Sleeves	390	2,610	--
16. Pressure flowpipe and fittings	2,775	4,625	--
17. Yoloy pipe and fittings	690	1,610	--
18. Chemical feed pipe	360	540	--
19. Instrument tubing and fittings	270	1,489	41
20. Supervisory control systems	7,699	29,915	2,165
21. Sewer and water	577	1,008	28
22. Plumbing fixtures	735	1,328	37
23. Insulation	105	190	5
24. Ventilation	525	949	26
25. Ferric chloride transfer pump	--	300	--
26. Portable pump	172	577	--
27. Sludge tank pit pump	3,122	--	--
28. Exterior sewers and manholes	43,335	9,665	--
29. Installation of Envirex equipment	15,659	38,009	1,055
30. Labor and insurance	15,385	50,255	1,394
Subtotal	147,214	273,370	9,243

C. Electrical Construction

Item	Site I	Site II & IIA
1. Distribution equipment	12,300	17,700
2. Miscellaneous control equipment	4,708	6,775
3. Lighting	1,084	3,842
4. Wiring	1,536	5,446
5. Labor	5,440	10,560
6. Bonds, taxes, permit	585	2,075
Subtotal	25,653	46,398
Site II		45,145
Site IIA		1,253

D. Engineering

	Site I	Site II	Site IIA
1. Design engineering			
Donohue and Associates Inc.	24,860	53,838	1,494
Envirex Inc.	10,673	24,232	672
2. On-Site inspection			
Donohue and Associates Inc.	7,181	15,551	431
Subtotal Engineering	42,714	93,621	2,597

E. Land	Site I	Site II	Site IIA
1. Purchased land	21,500	6,350	
2. Assessed value of city-owned property	3,600	36,300	1,180
Subtotal land	25,100	42,670	1,180
TOTAL CAPITAL COSTS	436,599	841,420	25,001

APPENDIX IV-C
SITE OPERATIONAL PARAMETERS

Table C1 OPERATING DATA FOR RUN NO. 1

Rainfall	
Date	4-29-73
Duration, min.	340
Amount, cm	0.81
Maximum intensity, cm/hr	0.25
Average intensity, cm/hr	0.14

General	Site I	Site II	Site IIA
Overflow treated, cu m	2180		
Duration of run, min	180		
Average flow rate, cu m/min	12.1		
Overflow bypassed, cu m	nm (not measured)		
During run, cu m	nm		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		
Backwash water volume, cu m	nm		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	1.05		
Solids loading, kg/sq m	.01319		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.052	
Detention time, hr	0.78	
Pressurized flow rate, cu m/min	nm	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	1-5	
Skimmer flight speed, m/min	0.91	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	15	
Effluent chlorine residual, mg/l	10	

Table C2 OPERATING DATA FOR RUN NO. 2

Rainfall	
Date	5-1-73
Duration, min.	150
Amount, cm	1.83
Maximum intensity, cm/hr	1.14
Average intensity, cm/hr	0.73

General	Site I	Site II	Site IIA
Overflow treated, cu m	9500	12226	76
Duration of run, min	240	105	16
Average flow rate, cu m/min	39.6	116.4	4.8
Overflow bypassed, cu m	nm	nm	0
During run, cu m	nm	nm	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	nm	nm	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	3.44	3.67	1.20
Solids loading, kg/sq m	.05536	.05429	.02091
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.169	.131
Detention time, hr	0.24	0.31
Pressurized flow rate, cu m/min	nm	nm
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	1-5	1-5
Skimmer flight speed, m/min	0.91	0.91

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	11
Polyelectrolyte, mg/l	4	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	15	8
Effluent chlorine residual, mg/l	nm	nm

Table C3 OPERATING DATA FOR RUN NO. 3

Rainfall	
Date	5-7-73
Duration, min.	nm
Amount, cm	nm
Maximum intensity, cm/hr	nm
Average intensity, cm/hr	nm

General	Site I	Site II	Site IIA
Overflow treated, cu m	3785		
Duration of run, min	225		
Average flow rate, cu m/min	16.8		
Overflow bypassed, cu m	nm		
During run, cu m	nm		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		
Backwash water volume, cu m	nm		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	1.46		
Solids loading, kg/sq m	.02032		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.072	
Detention time, hr	0.56	
Pressurized flow rate, cu m/min	nm	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	1-5	
Skimmer flight speed, m/min	0.91	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	15	
Effluent chlorine residual, mg/l	nm	

Table C4 OPERATING DATA FOR RUN NO. 4

Rainfall	
Date	5-8-73
Duration, min.	nm
Amount, cm	nm
Maximum intensity, cm/hr	nm
Average intensity, cm/hr	nm

General	Site I	Site II	Site IIA
Overflow treated, cu m	4920		
Duration of run, min	365		
Average flow rate, cu m/min	13.5		
Overflow bypassed, cu m	nm		
During run, cu m	nm		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		
Backwash water volume, cu m	171		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	1.17		
Solids loading, kg/sq m	.00840		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.058	
Detention time, hr	0.71	
Pressurized flow rate, cu m/min	nm	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	1-5	
Skimmer flight speed, m/min	0.91	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	15	
Effluent chlorine residual, mg/l	nm	

Table C5 OPERATING DATA FOR RUN NO. 5

Rainfall	
Date	5-25-73
Duration, min.	135
Amount, cm	1.04
Maximum intensity, cm/hr	1.02
Average intensity, cm/hr	0.46

General	Site I	Site II	Site IIA
Overflow treated, cu m	2952	3823	378
Duration of run, min	120	40	60
Average flow rate, cu m/min	24.6	95.6	6.3
Overflow bypassed, cu m	nm	nm	0
During run, cu m	nm	nm	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	64	nm	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	2.14	3.02	1.58
Solids loading, kg/sq m	.05522	.13726	.01573
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	5
Overflow rate, cu m/min/sq m	.105	.172
Detention time, hr	0.38	0.24
Pressurized flow rate, cu m/min	3.41	4.16
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	5
Polyelectrolyte, mg/l	4	1
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	15	4
Effluent chlorine residual, mg/l	5.3	nm

Table C6 OPERATING DATA FOR RUN NO. 6

Rainfall	
Date	5-27-73
Duration, min.	560
Amount, cm	236
Maximum intensity, cm/hr	2.44
Average intensity, cm/hr	0.25

General	Site I	Site II	Site IIA
Overflow treated, cu m	11961	43376	265
Duration of run, min	360	440	46
Average flow rate, cu m/min	33.2	98.6	5.8
Overflow bypassed, cu m	nm	nm	0
During run, cu m	2665	nm	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	198	nm	5
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	2.89	3.11	1.45
Solids loading, kg/sq m	.11254	.05931	.02751
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.142	.111
Detention time, hr	0.29	0.37
Pressurized flow rate, cu m/min	3.03	3.03
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	10
Polyelectrolyte, mg/l	4	0
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	8
Effluent chlorine residual, mg/l	3.5	3.5

Table C7 OPERATING DATA FOR RUN NO. 7

Rainfall	
Date	6-5-73
Duration, min.	60
Amount, cm	1.09
Maximum intensity, cm/hr	2.39
Average intensity, cm/hr	1.09

General	Site I	Site II	Site IIA
Overflow treated, cu m	6397		
Duration of run, min	200		
Average flow rate, cu m/min	32.0		
Overflow bypassed, cu m	nm		
During run, cu m	38		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		
Backwash water volume, cu m	108		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	2.78		
Solids loading, kg/sq m	.13043		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.137	
Detention time, hr	0.29	
Pressurized flow rate, cu m/min	3.79	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	3-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	1.8	

Table C8 OPERATING DATA FOR RUN NO. 8

Rainfall	
Date	6-15-73
Duration, min.	90
Amount, cm	0.46
Maximum intensity, cm/hr	0.56
Average intensity, cm/hr	0.31

General	Site I	Site II	Site IIA
Overflow treated, cu m	2271	984	
Duration of run, min	120	40	
Average flow rate, cu m/min	18.9	24.6	
Overflow bypassed, cu m	nm	nm	
During run, cu m	0	0	
Before and after run, cu m	nm	nm	
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	
Backwash water volume, cu m	65	nm	
Backwash water pressure, kg/sq cm	2.11	2.11	
Depth of submergence, m	1.45	1.37	
Wetted surface area, sq m	11.5	31.7	
Hydraulic loading, cu m/min/sq m	1.64	0.78	
Solids loading, kg/sq m	.03244	.01406	
Headloss, cm	30-41	30-41	

Flotation tanks	Site I	Site II
Tanks in operation	3	1
Overflow rate, cu m/min/sq m	.081	.221
Detention time, hr	0.50	0.18
Pressurized flow rate, cu m/min	3.03	2.84
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	9
Polyelectrolyte, mg/l	4	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	7
Effluent chlorine residual, mg/l	1.8	1.8

Table C9 OPERATING DATA FOR RUN NO. 9

Rainfall	
Date	6-16-73
Duration, min.	40
Amount, cm	0.58
Maximum intensity, cm/hr	3.25
Average intensity, cm/hr	0.87

General	Site I	Site II	Site IIA
Overflow treated, cu m	12453		
Duration of run, min	380		
Average flow rate, cu m/min	32.8		
Overflow bypassed, cu m	nm		
During run, cu m	53		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0		
Backwash water volume, cu m	197		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	2.85		
Solids loading, kg/sq m	.02863		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.140	
Detention time, hr	0.29	
Pressurized flow rate, cu m/min	3.12	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	3-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	1.3	

Table C10. OPERATING DATA FOR RUN NO. C10

Rainfall	
Date	7-2-73
Duration, min.	30
Amount, cm	0.81
Maximum intensity, cm/hr	4.57
Average intensity, cm/hr	1.62

General	Site I	Site II	Site IIA
Overflow treated, cu m	3482		
Duration of run, min	105		
Average flow rate, cu m/min	33.2		
Overflow bypassed, cu m	nm		
During run, cu m	38		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	6.0		
Backwash water volume, cu m	43		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	2.89		
Solids loading, kg/sq m	.16747		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.142	
Detention time, hr	0.28	
Pressurized flow rate, cu m/min	3.03	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	3-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	0	
Effluent chlorine residual, mg/l	0	

Table CII. OPERATING DATA FOR RUN NO. 11

Rainfall	
Date	7-3-73
Duration, min.	120
Amount, cm	1.14
Maximum intensity, cm/hr	3.05
Average intensity, cm/hr	0.57

General	Site I	Site II	Site IIA
Overflow treated, cu m	6132		
Duration of run, min	165		
Average flow rate, cu m/min	37.2		
Overflow bypassed, cu m	nm		
During run, cu m	0		
Before and after run, cu m	nm		
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	6.0		
Backwash water volume, cu m	151		
Backwash water pressure, kg/sq cm	2.11		
Depth of submergence, m	1.45		
Wetted surface area, sq m	11.5		
Hydraulic loading, cu m/min/sq m	3.23		
Solids loading, kg/sq m	.09231		
Headloss, cm	30-41		

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.159	
Detention time, hr	0.25	
Pressurized flow rate, cu m/min	2.65	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	3-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	
Polyelectrolyte, mg/l	4	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	2.7	

Table C12 OPERATING DATA FOR RUN NO. 12

Rainfall	
Date	7-20-73
Duration, min.	190
Amount, cm	3.30
Maximum intensity, cm/hr	3.81
Average intensity, cm/hr	1.04

General	Site I	Site II	Site IIA
Overflow treated, cu m	12907	17108	492
Duration of run, min	320	300	102
Average flow rate, cu m/min	40.3	57.0	4.8
Overflow bypassed, cu m	nm	nm	0
During run, cu m	1775	nm	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	5.2	5.2	3.0
Backwash water volume, cu m	188	nm	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	3.50	1.80	1.20
Solids loading, kg/sq m	.10155	.09446	nm
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.172	.064
Detention time, hr	0.23	0.64
Pressurized flow rate, cu m/min	2.84	nm
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	4-10	3-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	0
Polyelectrolyte, mg/l	4	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	0	4
Effluent chlorine residual, mg/l	0	0.4

Table C13 OPERATING DATA FOR RUN NO. 13

Rainfall	
Date	9-4-73
Duration, min.	120
Amount, cm	3.35
Maximum intensity, cm/hr	16.00
Average intensity, cm/hr	1.68

General	Site I	Site II	Site IIA
Overflow treated, cu m	2347	3217	454
Duration of run, min	175	170	47
Average flow rate, cu m/min	13.4	18.9	9.7
Overflow bypassed, cu m	nm	nm	0
During run, cu m	2506	nm	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	nm	798	13
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	1.17	0.60	2.42
Solids loading, kg/sq m	.19210	.02782	.06978
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.057	.042
Detention time, hr	0.71	0.96
Pressurized flow rate, cu m/min	2.50	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	4-10	3-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	0	32
Polyelectrolyte, mg/l	0	3
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	0	8
Effluent chlorine residual, mg/l	0	1.6

Table C14 OPERATING DATA FOR RUN NO. 14

Rainfall	
Date	9-17-73
Duration, min.	460
Amount, cm	2.54
Maximum intensity, cm/hr	0.57
Average intensity, cm/hr	0.33

General	Site I	Site II	Site IIA
Overflow treated, cu m	7684	25549	114
Duration of run, min	390	350	24
Average flow rate, cu m/min	19.7	73.0	4.8
Overflow bypassed, cu m	nm	nm	0
During run, cu m	0	0	0
Before and after run, cu m	nm	nm	0
Power used, KWH	800	4480	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	265	1640	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	1.71	2.30	1.20
Solids loading, kg/sq m	.05820	.08645	.09231
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.084	.164
Detention time, hr	0.48	0.25
Pressurized flow rate, cu m/min	2.50	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	0
Polyelectrolyte, mg/l	0	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	5
Effluent chlorine residual, mg/l	4.0	0.7

Table C15 OPERATING DATA FOR RUN NO.15

Rainfall	
Date	9-21-73
Duration, min.	130
Amount, cm	0.56
Maximum intensity, cm/hr	0.64
Average intensity, cm/hr	0.26

General	Site I	Site II	Site IIA
Overflow treated, cu m	643	1249	
Duration of run, min	80	90	
Average flow rate, cu m/min	8.0	13.9	
Overflow bypassed, cu m	nm	nm	
During run, cu m	220	nm	
Before and after run, cu m	nm	nm	
Power used, KWH	nm	160	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	
Backwash water volume, cu m	35	nm	
Backwash water pressure, kg/sq cm	2.11	2.11	
Depth of submergence, m	1.45	1.37	
Wetted surface area, sq m	11.5	31.7	
Hydraulic loading, cu m/min/sq m	0.70	0.44	
Solids loading, kg/sq m	.02174	.01310	
Headloss, cm	30-41	30-41	

Flotation tanks	Site I	Site II
Tanks in operation	1	1
Overflow rate, cu m/min/sq m	.103	.125
Detention time, hr	0.39	0.33
Pressurized flow rate, cu m/min	3.31	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-7	3-7
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	0
Polyelectrolyte, mg/l	0	3
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	8
Effluent chlorine residual, mg/l	1.8	3.1

Table C16 OPERATING DATA FOR RUN NO. 16

Rainfall	
Date	9-24-73
Duration, min.	280
Amount, cm	1.52
Maximum intensity, cm/hr	1.90
Average intensity, cm/hr	0.33

General	Site I	Site II	Site IIA
Overflow treated, cu m	7078		114
Duration of run, min	310		22
Average flow rate, cu m/min	22.8		5.2
Overflow bypassed, cu m	nm		0
During run, cu m	0		0
Before and after run, cu m	nm		0
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		3.0
Backwash water volume, cu m	222		nm
Backwash water pressure, kg/sq cm	2.11		2.11
Depth of submergence, m	1.45		1.37
Wetted surface area, sq m	11.5		4.0
Hydraulic loading, cu m/min/sq m	1.98		1.30
Solids loading, kg/sq m	.03572		.01773
Headloss, cm	30-41		30

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.097	
Detention time, hr	0.42	
Pressurized flow rate, cu m/min	2.50	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	3-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	
Polyelectrolyte, mg/l	0	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	2.7	

Table C17 OPERATING DATA FOR RUN NO. 17

Rainfall	
Date	9-28-73
Duration, min.	370
Amount, cm	3.56
Maximum intensity, cm/hr	3.61
Average intensity, cm/hr	0.58

General	Site I	Site II	Site IIA
Overflow treated, cu m	16540		151
Duration of run, min	530		27
Average flow rate, cu m/min	31.2		5.6
Overflow bypassed, cu m	nm		0
During run, cu m	2067		0
Before and after run, cu m	nm		0
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		3.0
Backwash water volume, cu m	371		nm
Backwash water pressure, kg/sq cm	2.11		2.11
Depth of submergence, m	1.45		1.37
Wetted surface area, sq m	11.5		4.0
Hydraulic loading, cu m/min/sq m	2.71		1.40
Solids loading, kg/sq m	.22411		.9681
Headloss, cm	30-41		30

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.133	
Detention time, hr	0.30	
Pressurized flow rate, cu m/min	3.03	
Pressurized tank pressure, kg/sq cm	2.81	
Skimmer time (on-off), min	3-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	
Polyelectrolyte, mg/l	0	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	2.2	

Table C18 OPERATING DATA FOR RUN NO. 18

Rainfall	
Date	10-12-73
Duration, min.	650
Amount, cm	1.68
Maximum intensity, cm/hr	2.03
Average intensity, cm/hr	0.16

General	Site I	Site II	Site IIA
Overflow treated, cu m	2498	8062	114
Duration of run, min	160	125	23
Average flow rate, cu m/min	15.6	64.5	5.0
Overflow bypassed, cu m	nm	nm	0
During run, cu m	0	0	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	95	nm	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	1.36	2.03	1.25
Solids loading, kg/sq m	.10155	.08343	nm
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	3
Overflow rate, cu m/min/sq m	.067	.193
Detention time, hr	0.61	0.21
Pressurized flow rate, cu m/min	2.37	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-7
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	59
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	6
Effluent chlorine residual, mg/l	0	0

Table C19 OPERATING DATA FOR RUN NO. 19

Rainfall	
Date	10-27-73
Duration, min.	880
Amount, cm	1.45
Maximum intensity, cm/hr	0.18
Average intensity, cm/hr	0.10

General	Site I	Site II	Site IIA
Overflow treated, cu m	3142	5072	38
Duration of run, min	300	230	7
Average flow rate, cu m/min	10.5	22.1	5.4
Overflow bypassed, cu m	nm	nm	0
During run, cu m	0	0	0
Before and after run, cu m	nm	nm	0
Power used, KWH	480	800	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	192	158	9
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	0.91	0.70	1.35
Solids loading, kg/sq m	.01896	.04129	.03850
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.045	.050
Detention time, hr	0.91	0.82
Pressurized flow rate, cu m/min	2.50	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-7
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	57
Polyelectrolyte, mg/l	0	0
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	9
Effluent chlorine residual, mg/l	0.4	2.6

Table C20 OPERATING DATA FOR RUN NO. 20

Rainfall	
Date	10-31-73
Duration, min.	520
Amount, cm	1.35
Maximum intensity, cm/hr	0.30
Average intensity, cm/hr	0.16

General	Site I	Site II	Site IIA
Overflow treated, cu m	7116	3104	151
Duration of run, min	520	175	29
Average flow rate, cu m/min	13.7	17.7	5.2
Overflow bypassed, cu m	nm	nm	0
During run, cu m	0	0	0
Before and after run, cu m	nm	nm	0
Power used, KWH	1760	480	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	206	nm	1
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	1.19	0.56	1.30
Solids loading, kg/sq m	.02208	.01975	.02428
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.059	.040
Detention time, hr	0.69	1.02
Pressurized flow rate, cu m/min	2.65	2.18
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-7
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	40	70
Polyelectrolyte, mg/l	0	0
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	10
Effluent chlorine residual, mg/l	1.8	1.3

Table C21 OPERATING DATA FOR RUN NO. 21

Rainfall	
Date	11-14-73
Duration, min.	480
Amount, cm	2.39
Maximum intensity, cm/hr	1.14
Average intensity, cm/hr	0.30

General	Site I	Site II	Site IIA
Overflow treated, cu m	7843	4618	189
Duration of run, min	485	132	38
Average flow rate, cu m/min	16.2	35.0	5.0
Overflow bypassed, cu m	nm	nm	0
During run, cu m	280	0	0
Before and after run, cu m	nm	nm	0
Power used, KWH	nm	800	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	310	nm	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	1.41	1.10	1.25
Solids loading, kg/sq m	.04447	.03815	.03914
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	6
Overflow rate, cu m/min/sq m	.069	.052
Detention time, hr	0.41	0.78
Pressurized flow rate, cu m/min	2.46	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	3-10	3-7
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	0
Polyelectrolyte, mg/l	4	7
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	8
Effluent chlorine residual, mg/l	nm	nm

Table C22 OPERATING DATA FOR RUN NO. 22

Rainfall	
Date	12-4-73
Duration, min.	860
Amount, cm	3.12
Maximum intensity, cm/hr	0.56
Average intensity, cm/hr	0.22

General	Site I	Site II	Site IIA
Overflow treated, cu m	43944	16313	416
Duration of run, min	2070	453	83
Average flow rate, cu m/min	21.2	36.0	5.0
Overflow bypassed, cu m	nm	10106	0
During run, cu m	4122	3596	0
Before and after run, cu m	nm	6510	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	3.0
Backwash water volume, cu m	638	815	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	11.5	31.7	4.0
Hydraulic loading, cu m/min/sq m	1.84	1.14	1.25
Solids loading, kg/sq m	.03552	.03385	.02897
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.091	.040
Detention time, hr	0.45	1.01
Pressurized flow rate, cu m/min	2.46	2.91
Pressurized tank pressure, kg/sq cm	2.81	2.81
Skimmer time (on-off), min	4-10	4-10
Skimmer flight speed, m/min	0.70	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	20	0
Polyelectrolyte, mg/l	0	6
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	0.7	0

Table C23 OPERATING DATA FOR RUN NO. 23

Rainfall	
Date	3-28-74
Duration, min.	nm
Amount, cm	nm
Maximum intensity, cm/hr	nm
Average intensity, cm/hr	nm

General	Site I	Site II	Site IIA
Overflow treated, cu m	4769		151
Duration of run, min	195		31
Average flow rate, cu m/min	24.5		4.9
Overflow bypassed, cu m	2720		0
During run, cu m	0		0
Before and after run, cu m	2720		0
Power used, KWH	nm		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.0		4.5
Backwash water volume, cu m	nm		nm
Backwash water pressure, kg/sq cm	2.11		2.11
Depth of submergence, m	1.45		1.37
Wetted surface area, sq m	10.7		4.0
Hydraulic loading, cu m/min/sq m	2.29		1.22
Solids loading, kg/sq m	.06817		.03582
Headloss, cm	30-41		30

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.105	
Detention time, hr	0.39	
Pressurized flow rate, cu m/min	2.41	
Pressurized tank pressure, kg/sq cm	2.88	
Skimmer time (on-off), min	4-10	
Skimmer flight speed, m/min	0.70	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	51	
Polyelectrolyte, mg/l	1	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	2.7	

Table C24 OPERATING DATA FOR RUN NO. 24

Rainfall	
Date	4-3-74
Duration, min.	290
Amount, cm	1.57
Maximum intensity, cm/hr	6.10
Average intensity, cm/hr	0.32

General	Site I	Site II	Site IIA
Overflow treated, cu m	7684	1681	76
Duration of run, min	300	30	17
Average flow rate, cu m/min	25.6	56.0	4.5
Overflow bypassed, cu m	5660	96896	0
During run, cu m	341	1476	0
Before and after run, cu m	5319	95420	0
Power used, KWH	nm	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	4.0
Backwash water volume, cu m	277	nm	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	2.39	1.90	1.12
Solids loading, kg/sq m	.15462	.24570	.21414
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	nm
Overflow rate, cu m/min/sq m	.109	nm
Detention time, hr	0.37	nm
Pressurized flow rate, cu m/min	nm	nm
Pressurized tank pressure, kg/sq cm	nm	nm
Skimmer time (on-off), min	2-15	2-15
Skimmer flight speed, m/min	0.76	0.76

Chemical addition	Site I	Site II
Ferric chloride, mg/l		
Polyelectrolyte, mg/l		
Polyelectrolyte type		
Chlorine, mg/l		
Effluent chlorine residual, mg/l		

Table C25 OPERATING DATA FOR RUN NO. 25

Rainfall	
Date	4-18-74
Duration, min.	200
Amount, cm	0.66
Maximum intensity, cm/hr	0.46
Average intensity, cm/hr	0.20

General	Site I	Site II	Site IIA
Overflow treated, cu m	3899	5942	38
Duration of run, min	230	195	9
Average flow rate, cu m/min	17.0	30.5	4.2
Overflow bypassed, cu m	2073	0	0
During run, cu m	0	0	0
Before and after run, cu m	2073	0	0
Power used, KWH	320	480	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.0	4.0
Backwash water volume, cu m	184	145	5
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.59	1.03	1.05
Solids loading, kg/sq m	.02423	.03097	.03308
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.073	.068
Detention time, hr	0.56	0.59
Pressurized flow rate, cu m/min	3.60	1.97
Pressurized tank pressure, kg/sq cm	2.60	2.67
Skimmer time (on-off), min	2-15	2-15
Skimmer flight speed, m/min	0.76	0.76

Chemical addition	Site I	Site II
Ferric chloride, mg/l	59	108
Polyelectrolyte, mg/l	1	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	7
Effluent chlorine residual, mg/l	2.2	nm

Table C26 OPERATING DATA FOR RUN NO.26

Rainfall	
Date	4-28-74
Duration, min.	270
Amount, cm	3.81
Maximum intensity, cm/hr	5.08
Average intensity, cm/hr	0.85

General	Site I	Site II	Site IIA
Overflow treated, cu m	32135	22899	530
Duration of run, min	1623	365	67
Average flow rate, cu m/min	19.8	62.7	7.9
Overflow bypassed, cu m	22634	26116	0
During run, cu m	2120	24034	0
Before and after run, cu m	20514	2082	0
Power used, KWH	3200	1760	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	5.2	4.0
Backwash water volume, cu m	61	25	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.85	2.13	1.98
Solids loading, kg/sq m	.07692	.10430	.22778
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.085	.070
Detention time, hr	0.48	0.58
Pressurized flow rate, cu m/min	3.57	2.34
Pressurized tank pressure, kg/sq cm	2.88	2.60
Skimmer time (on-off), min	2-15	3-7
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	42	16
Polyelectrolyte, mg/l	4	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	7
Effluent chlorine residual, mg/l	3.1	nm

Table C27 OPERATING DATA FOR RUN NO. 27

Rainfall	
Date	5-5-74
Duration, min.	90
Amount, cm	0.30
Maximum intensity, cm/hr	0.33
Average intensity, cm/hr	0.20

General	Site I	Site II	Site IIA
Overflow treated, cu m	946	1173	38
Duration of run, min	85	103	7
Average flow rate, cu m/min	11.1	11.4	5.4
Overflow bypassed, cu m	0	0	0
During run, cu m	0	0	0
Before and after run, cu m	0	0	0
Power used, KWH	160	160	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	4.0
Backwash water volume, cu m	48	36	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.04	0.39	1.35
Solids loading, kg/sq m	.01954	.00887	.01211
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	1	2
Overflow rate, cu m/min/sq m	.142	.051
Detention time, hr	0.28	0.80
Pressurized flow rate, cu m/min	3.58	1.42
Pressurized tank pressure, kg/sq cm	2.74	2.67
Skimmer time (on-off), min	2-15	2-8
Skimmer flight speed, m/min	0.76	0.76

Chemical addition	Site I	Site II
Ferric chloride, mg/l	0	86
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	10
Effluent chlorine residual, mg/l	2.2	2.2

Table C28 OPERATING DATA FOR RUN NO. 28

Rainfall	
Date	5-8-74
Duration, min.	670
Amount, cm	1.09
Maximum intensity, cm/hr	0.18
Average intensity, cm/hr	0.10

General	Site I	Site II	Site IIA
Overflow treated, cu m	2612	5413	114
Duration of run, min	210	275	22
Average flow rate, cu m/min	12.4	19.7	5.2
Overflow bypassed, cu m	762	1136	0
During run, cu m	0	0	0
Before and after run, cu m	762	1136	0
Power used, KWH	160	800	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	3.9	4.0
Backwash water volume, cu m	84	307	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.16	0.67	1.30
Solids loading, kg/sq m	.02643	.04484	.02775
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.053	.044
Detention time, hr	0.76	0.92
Pressurized flow rate, cu m/min	1.92	2.24
Pressurized tank pressure, kg/sq cm	2.53	2.67
Skimmer time (on-off), min	2-13	2-13
Skimmer flight speed, m/min	0.76	0.88

Chemical addition	Site I	Site II
Ferric chloride, mg/l	0	24
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	7
Effluent chlorine residual, mg/l	4.0	1.8

Table C29 OPERATING DATA FOR RUN NO. 29

Rainfall	
Date	5-11-74
Duration, min.	450
Amount, cm	1.14
Maximum intensity, cm/hr	3.05
Average intensity, cm/hr	0.15

General	Site I	Site II	Site IIA
Overflow treated, cu m	3369	6321	114
Duration of run, min	205	283	24
Average flow rate, cu m/min	16.4	22.3	4.8
Overflow bypassed, cu m	16105	21593	0
During run, cu m	0	0	0
Before and after run, cu m	16105	21593	0
Power used, KWH	320	1440	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	3.9	4.0
Backwash water volume, cu m	77	108	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.53	0.76	1.20
Solids loading, kg/sq m	.05639	.10567	.13766
Headloss, cm			

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.070	.025
Detention time, hr	0.58	1.62
Pressurized flow rate, cu m/min	2.20	2.37
Pressurized tank pressure, kg/sq cm	3.44	2.67
Skimmer time (on-off), min	2-15	3-15
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	33	19
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	9
Effluent chlorine residual, mg/l	2.2	nm

Table C30 OPERATING DATA FOR RUN NO. 30

Rainfall	
Date	5-13-74
Duration, min.	50
Amount, cm	0.51
Maximum intensity, cm/hr	2.29
Average intensity, cm/hr	0.61

General	Site I	Site II	Site IIA
Overflow treated, cu m	2536	3066	38
Duration of run, min	142	140	14
Average flow rate, cu m/min	17.9	21.9	2.7
Overflow bypassed, cu m	0	0	0
During run, cu m	0	0	0
Before and after run, cu m	0	0	0
Power used, KWH			

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	4.5	4.0
Backwash water volume, cu m	48	131	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.67	0.74	0.68
Solids loading, kg/sq m	.06250	.06036	.05492
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.076	.025
Detention time, hr	0.53	1.65
Pressurized flow rate, cu m/min	1.98	2.38
Pressurized tank pressure, kg/sq cm	3.59	2.60
Skimmer time (on-off), min	2-15	3-15
Skimmer flight speed, m/min	0.76	0.76

Chemical addition	Site I	Site II
Ferric chloride, mg/l	34	147
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	1.3	0

Table C31 OPERATING DATA FOR RUN NO. 31

Rainfall	
Date	5-14-74
Duration, min.	240
Amount, cm	1.32
Maximum intensity, cm/hr	1.22
Average intensity, cm/hr	0.33

General	Site I	Site II	Site IIA
Overflow treated, cu m	24565	17865	76
Duration of run, min	1455	390	15
Average flow rate, cu m/min	16.9	45.8	5.1
Overflow bypassed, cu m	984	1892	0
During run, cu m	984	1514	0
Before and after run, cu m	0	378	0
Power used, KWH	2480	1600	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	7.0	4.0
Backwash water volume, cu m	1124	271	91
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.58	1.55	1.28
Solids loading, kg/sq m	.03039	.03497	.02375
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.072	.051
Detention time, hr	0.56	0.79
Pressurized flow rate, cu m/min	3.99	2.35
Pressurized tank pressure, kg/sq cm	3.30	2.67
Skimmer time (on-off), min	2-15	3-15
Skimmer flight speed, m/min	0.76	0.88

Chemical addition	Site I	Site II
Ferric chloride, mg/l	19	13
Polyelectrolyte, mg/l	2	1
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	4.4	0

Table C32 OPERATING DATA FOR RUN NO. 32

Rainfall	
Date	5-16-74
Duration, min.	300
Amount, cm	1.98
Maximum intensity, cm/hr	0.56
Average intensity, cm/hr	0.40

General	Site I	Site II	Site IIA
Overflow treated, cu m	21574	27290	265
Duration of run, min	735	435	49
Average flow rate, cu m/min	29.4	62.7	5.4
Overflow bypassed, cu m	366	11734	0
During run, cu m	366	11734	0
Before and after run, cu m	0	0	0
Power used, KWH	1600	1600	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	6.1	4.0
Backwash water volume, cu m	699	205	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	2.75	2.13	1.35
Solids loading, kg/sq m	.07652	.03080	.02204
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.126	.070
Detention time, hr	0.32	0.58
Pressurized flow rate, cu m/min	3.94	2.16
Pressurized tank pressure, kg/sq cm	3.30	2.60
Skimmer time (on-off), min	2-15	3-20
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	24	18
Polyelectrolyte, mg/l	2	1
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	nm	0

Table C33 OPERATING DATA FOR RUN NO. 33

Rainfall	
Date	5-16-74
Duration, min.	230
Amount, cm	0.53
Maximum intensity, cm/hr	3.66
Average intensity, cm/hr	0.14

General	Site I	Site II	Site IIA
Overflow treated, cu m	15973	11317	38
Duration of run, min	860	260	nm
Average flow rate, cu m/min	18.6	43.5	nm
Overflow bypassed, cu m	21832	2650	0
During run, cu m	68	2271	0
Before and after run, cu m	21764	379	0
Power used, KWH	1760	960	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	5.2	4.0
Backwash water volume, cu m	592	67	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.74	1.47	nm
Solids loading, kg/sq m	nm	nm	nm
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.079	.049
Detention time, hr	0.51	0.83
Pressurized flow rate, cu m/min	3.89	2.12
Pressurized tank pressure, kg/sq cm	3.23	2.60
Skimmer time (on-off), min	2-15	3-20
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	8	0
Polyelectrolyte, mg/l	1	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	nm	0

Table C34 OPERATING DATA FOR RUN NO. 34

Rainfall	
Date	5-21-74
Duration, min.	130
Amount, cm	0.64
Maximum intensity, cm/hr	6.98
Average intensity, cm/hr	0.30

General	Site I	Site II	Site IIA
Overflow treated, cu m	3217	5337	57
Duration of run, min	170	165	10
Average flow rate, cu m/min	18.9	32.3	5.7
Overflow bypassed, cu m	1407	0	0
During run, cu m	1407	0	0
Before and after run, cu m	0	0	0
Power used, KWH	400	640	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	7.0	4.0
Backwash water volume, cu m	65	112	30
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.77	1.09	1.42
Solids loading, kg/sq m	.08166	.16282	.12158
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.081	.036
Detention time, hr	0.50	1.12
Pressurized flow rate, cu m/min	3.57	2.57
Pressurized tank pressure, kg/sq cm	3.02	2.60
Skimmer time (on-off), min	2-15	2-20
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	114	14
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	nm	0

Table C35 OPERATING DATA FOR RUN NO. 35

Rainfall	
Date	5-21-74
Duration, min.	840
Amount, cm	1.68
Maximum intensity, cm/hr	3.43
Average intensity, cm/hr	0.12

General	Site I	Site II	Site IIA
Overflow treated, cu m	36639	11166	38
Duration of run, min	2479	241	7
Average flow rate, cu m/min	14.8	46.3	5.4
Overflow bypassed, cu m	7042	137774	0
During run, cu m	57	4542	0
Before and after run, cu m	6985	133232	0
Power used, KWH	4400	800	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5	7.0	4.0
Backwash water volume, cu m	350	394	9
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.38	1.57	1.35
Solids loading, kg/sq m	.03386	.19894	.05268
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.063	.052
Detention time, hr	0.64	0.78
Pressurized flow rate, cu m/min	4.05	2.52
Pressurized tank pressure, kg/sq cm	3.44	2.81
Skimmer time (on-off), min	2-15	2-20
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	0	11
Polyelectrolyte, mg/l	2	1
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	2.6	0

Table C36 OPERATING DATA FOR RUN NO.36

Rainfall	
Date	6-6-74
Duration, min.	270
Amount, cm	0.53
Maximum intensity, cm/hr	2.29
Average intensity, cm/hr	0.12

General	Site I	Site II	Site IIA
Overflow treated, cu m	1892		38
Duration of run, min	165		9
Average flow rate, cu m/min	11.5		4.2
Overflow bypassed, cu m	0		0
During run, cu m	0		0
Before and after run, cu m	0		0
Power used, KWH	240		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	4.5		4.0
Backwash water volume, cu m	27		nm
Backwash water pressure, kg/sq cm	2.11		2.11
Depth of submergence, m	1.45		1.37
Wetted surface area, sq m	10.7		4.0
Hydraulic loading, cu m/min/sq m	1.07		1.05
Solids loading, kg/sq m	.02116		nm
Headloss, cm	30-41		30

Flotation tanks	Site I	Site II
Tanks in operation	3	
Overflow rate, cu m/min/sq m	.049	
Detention time, hr	0.83	
Pressurized flow rate, cu m/min	2.54	
Pressurized tank pressure, kg/sq cm	2.25	
Skimmer time (on-off), min	2-15	
Skimmer flight speed, m/min	0.76	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	136	
Polyelectrolyte, mg/l	2	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	0	
Effluent chlorine residual, mg/l	0	

Table C37 OPERATING DATA FOR RUN NO. 37

Rainfall	
Date	6-6-74
Duration, min.	320
Amount, cm	1.52
Maximum intensity, cm/hr	3.81
Average intensity, cm/hr	0.28

General	Site I	Site II	Site IIA
Overflow treated, cu m	7684	5905	151
Duration of run, min	410	345	28
Average flow rate, cu m/min	18.7	17.1	5.4
Overflow bypassed, cu m	2080	0	0
During run, cu m	49	0	0
Before and after run, cu m	2031	0	0
Power used, KWH	640	800	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	7.0	4.0
Backwash water volume, cu m	80	264	23
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.75	0.58	1.35
Solids loading, kg/sq m	.06123	.01477	nm
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.080	.019
Detention time, hr	0.51	2.12
Pressurized flow rate, cu m/min	3.94	1.78
Pressurized tank pressure, kg/sq cm	3.44	2.67
Skimmer time (on-off), min	2-15	2-18
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	34	56
Polyelectrolyte, mg/l	2	3
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	0.5	0

Table C38 OPERATING DATA FOR RUN NO. 38

Rainfall	
Date	6-9-74
Duration, min.	300
Amount, cm	2.59
Maximum intensity, cm/hr	3.81
Average intensity, cm/hr	0.52

General	Site I	Site II	Site IIA
Overflow treated, cu m	15254	13929	492
Duration of run, min	495	295	78
Average flow rate, cu m/min	30.8	47.2	6.3
Overflow bypassed, cu m	33255	131340	0
During run, cu m	2877	20818	0
Before and after run, cu m	30378	110552	0
Power used, KWH	1120	320	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	7.0	4.0
Backwash water volume, cu m	391	301	25
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	2.89	1.60	1.58
Solids loading, kg/sq m	.05927	.01985	.07599
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.132	.053
Detention time, hr	0.31	0.77
Pressurized flow rate, cu m/min	4.08	2.44
Pressurized tank pressure, kg/sq cm	3.23	2.81
Skimmer time (on-off), min	2-15	2-13
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	36	12
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	2.6	0

Table C39 OPERATING DATA FOR RUN NO. 39

Rainfall	
Date	6-11-74
Duration, min.	60
Amount, cm	0.41
Maximum intensity, cm/hr	5.72
Average intensity, cm/hr	0.41

General	Site I	Site II	Site IIA
Overflow treated, cu m	1665	2044	38
Duration of run, min	125	120	7
Average flow rate, cu m/min	13.3	17.0	5.4
Overflow bypassed, cu m	2748	0	0
During run, cu m	0	0	0
Before and after run, cu m	2748	0	0
Power used, KWH	240	320	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	4.5	4.0
Backwash water volume, cu m	33	nm	5
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.24	0.58	1.35
Solids loading, kg/sq m	.00933	.02448	.05434
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	3
Overflow rate, cu m/min/sq m	.057	.051
Detention time, hr	0.71	0.80
Pressurized flow rate, cu m/min	4.01	3.03
Pressurized tank pressure, kg/sq cm	3.23	2.88
Skimmer time (on-off), min	2-15	2-13
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	30	76
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	0
Effluent chlorine residual, mg/l	0.9	0

Table C40 OPERATING DATA FOR RUN NO. 40

Rainfall	
Date	7-3-74
Duration, min.	780
Amount, cm	2.41
Maximum intensity, cm/hr	3.35
Average intensity, cm/hr	0.19

General	Site I	Site II	Site IIA
Overflow treated, cu m	7229	nm	229
Duration of run, min	440	nm	41
Average flow rate, cu m/min	16.4	nm	5.6
Overflow bypassed, cu m	284	2650	0
During run, cu m	121	2650	0
Before and after run, cu m	163	0	0
Power used, KWH	640	1280	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	7.0	4.0
Backwash water volume, cu m	155	270	12
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.53	nm	1.40
Solids loading, kg/sq m	.06866	nm	.18335
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.070	nm
Detention time, hr	0.58	nm
Pressurized flow rate, cu m/min	4.01	3.03
Pressurized tank pressure, kg/sq cm	3.23	2.88
Skimmer time (on-off), min	2-15	2-13
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	25	nm
Polyelectrolyte, mg/l	2	nm
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	nm
Effluent chlorine residual, mg/l	0	nm

Table C41 OPERATING DATA FOR RUN NO. 41

Rainfall	
Date	7-10-74
Duration, min.	580
Amount, cm	1.22
Maximum intensity, cm/hr	0.41
Average intensity, cm/hr	0.13

General	Site I	Site II	Site IIA
Overflow treated, cu m	5223	9841	57
Duration of run, min	330	165	11
Average flow rate, cu m/min	15.8	59.6	5.2
Overflow bypassed, cu m	0	0	0
During run, cu m	0	0	0
Before and after run, cu m	0	0	0
Power used, KWH	480	640	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	7.0	4.0
Backwash water volume, cu m	118	34	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.48	2.02	1.30
Solids loading, kg/sq m	.01524	.13454	.11269
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	8
Overflow rate, cu m/min/sq m	.067	.067
Detention time, hr	0.60	0.61
Pressurized flow rate, cu m/min	3.97	2.42
Pressurized tank pressure, kg/sq cm	3.37	2.88
Skimmer time (on-off), min	2-15	2-13
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	43	27
Polyelectrolyte, mg/l	2	1
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	20	11
Effluent chlorine residual, mg/l	2.6	5.3

Table C42 OPERATING DATA FOR RUN NO. 42

Rainfall	
Date	7-22-74
Duration, min.	60
Amount, cm	0.79
Maximum intensity, cm/hr	3.25
Average intensity, cm/hr	0.79

General	Site I	Site II	Site IIA
Overflow treated, cu m	1892	2536	76
Duration of run, min	135	95	14
Average flow rate, cu m/min	14.0	26.7	5.4
Overflow bypassed, cu m	0	757	0
During run, cu m	0	757	0
Before and after run, cu m	0	0	0
Power used, KWH	240	640	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	7.0	4.5	4.0
Backwash water volume, cu m	81	91	nm
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.31	0.91	1.35
Solids loading, kg/sq m	.03601	.02716	.20364
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	4
Overflow rate, cu m/min/sq m	.060	.060
Detention time, hr	0.68	0.69
Pressurized flow rate, cu m/min	3.97	2.80
Pressurized tank pressure, kg/sq cm	3.30	2.88
Skimmer time (on-off), min	2-15	2-13
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	34	69
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	20
Effluent chlorine residual, mg/l	0	nm

Table C43 OPERATING DATA FOR RUN NO.43

Rainfall	
Date	7-25-74
Duration, min.	170
Amount, cm	0.33
Maximum intensity, cm/hr	0.69
Average intensity, cm/hr	0.12

General	Site I	Site II	Site IIA
Overflow treated, cu m	908	1703	38
Duration of run, min	89	70	8
Average flow rate, cu m/min	10.2	24.3	4.8
Overflow bypassed, cu m	0	0	0
During run, cu m	0	0	0
Before and after run, cu m	0	0	0
Power used, KWH	80	160	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	5.2	4.5	4.0
Backwash water volume, cu m	37	nm	0
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	0.95	0.82	1.20
Solids loading, kg/sq m	.02257	.05255	.02458
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	2	3
Overflow rate, cu m/min/sq m	.065	.073
Detention time, hr	0.62	0.56
Pressurized flow rate, cu m/min	3.94	2.76
Pressurized tank pressure, kg/sq cm	3.30	2.88
Skimmer time (on-off), min	2-15	2-15
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	35	32
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	10	15
Effluent chlorine residual, mg/l	0	nm

Table C44 OPERATING DATA FOR RUN NO.44

Rainfall	
Date	8-10-74
Duration, min.	150
Amount, cm	0.51
Maximum intensity, cm/hr	1.07
Average intensity, cm/hr	0.20

General	Site I	Site II	Site IIA
Overflow treated, cu m	643		19
Duration of run, min	75		3
Average flow rate, cu m/min	8.6		6.3
Overflow bypassed, cu m	0		0
During run, cu m	0		0
Before and after run, cu m	0		0
Power used, KWH	80		

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	5.2		4.0
Backwash water volume, cu m	59		18
Backwash water pressure, kg/sq cm	2.11		2.11
Depth of submergence, m	1.45		1.37
Wetted surface area, sq m	10.7		4.0
Hydraulic loading, cu m/min/sq m	0.80		1.58
Solids loading, kg/sq m	.01725		.06651
Headloss, cm	30-41		30

Flotation tanks	Site I	Site II
Tanks in operation	1	
Overflow rate, cu m/min/sq m	.110	
Detention time, hr	0.37	
Pressurized flow rate, cu m/min	4.35	
Pressurized tank pressure, kg/sq cm	3.09	
Skimmer time (on-off), min	2-15	
Skimmer flight speed, m/min	0.76	

Chemical addition	Site I	Site II
Ferric chloride, mg/l	43	
Polyelectrolyte, mg/l	2	
Polyelectrolyte type	Nalco 607	
Chlorine, mg/l	10	
Effluent chlorine residual, mg/l	0	

Table C45 OPERATING DATA FOR RUN NO. 45

Rainfall	
Date	8-16-74
Duration, min.	360
Amount, cm	1.42
Maximum intensity, cm/hr	2.29
Average intensity, cm/hr	0.24

General	Site I	Site II	Site IIA
Overflow treated, cu m	4958	6170	95
Duration of run, min	305	165	17
Average flow rate, cu m/min	16.3	37.4	5.6
Overflow bypassed, cu m	0	0	0
During run, cu m	0	0	0
Before and after run, cu m	0	0	0
Power used, KWH	480	nm	

Drum screens	Site I	Site II	Site IIA
Rotation speed, rpm	5.2	4.5	4.0
Backwash water volume, cu m	157	141	47
Backwash water pressure, kg/sq cm	2.11	2.11	2.11
Depth of submergence, m	1.45	1.37	1.37
Wetted surface area, sq m	10.7	29.5	4.0
Hydraulic loading, cu m/min/sq m	1.52	1.27	1.40
Solids loading, kg/sq m	.03562	.04144	.05732
Headloss, cm	30-41	30-41	30

Flotation tanks	Site I	Site II
Tanks in operation	3	5
Overflow rate, cu m/min/sq m	.070	.067
Detention time, hr	0.59	0.61
Pressurized flow rate, cu m/min	3.88	2.54
Pressurized tank pressure, kg/sq cm	3.30	2.81
Skimmer time (on-off), min	2-15	2-15
Skimmer flight speed, m/min	0.76	0.70

Chemical addition	Site I	Site II
Ferric chloride, mg/l	39	33
Polyelectrolyte, mg/l	2	2
Polyelectrolyte type	Nalco 607	Nalco 607
Chlorine, mg/l	20	8
Effluent chlorine residual, mg/l	4.4	nm

APPENDIX IV-D

ANALYTICAL RESULTS FOR SYSTEM OPERATIONS

Table D1. ANALYTICAL RESULTS FOR RUN NO. D1

April 29, 1973

Site	Rainfall, cm
Racine Zoo, NE side	0.64
Fire House, NW side	nm
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	50	45	31					
Dissolved BOD, mg/l	16		22					
TOC, mg/l	46	39	30					
DOC, mg/l	18		18					
Total Solids, mg/l	518		502					
Suspended Solids, mg/l	101	102	46					
Sus. Vol. Solids, mg/l	44		14					
Total Phosphorus, mg/l P	2.3		1.0					
Fecal Coli, #/100 ml	2400		<3					
pH	7.65		7.45					
Temperature, ^{o}C								

Table D2. ANALYTICAL RESULTS FOR RUN NO. 2

May 1, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.83
Fire House, NW side	nm
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	10	16	13	11		7	3	3
Dissolved BOD, mg/l	6		7	6		5		
TOC, mg/l	19	27	20	21		15	12	15
DOC, mg/l	10		10	10		8		
Total Solids, mg/l	521		444	474		345		
Suspended Solids, mg/l	130	104	62	124		101	97	51
Sus. Vol. Solids, mg/l	17		13	21		24		
Total Phosphorus, mg/l P	0.62		0.4	0.63		0.15	0.21	0.15
Fecal Coli, #/100 ml	380		<7	40,000		<7	3,500	400
pH	7.78	7.00	7.62	8.18	7.30	6.45	8.10	8.40
Temperature, ^{o}C								

Table D3. ANALYTICAL RESULTS FOR RUN NO. D3

May 7, 1973

Site	Rainfall, cm
Racine Zoo, NE side	nm
Fire House, NW side	nm
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	43	55	41					
Dissolved BOD, mg/l	14		27					
TOC, mg/l	55	71	45					
DOC, mg/l	75		22					
Total Solids, mg/l	554		534					
Suspended Solids, mg/l	112	149	72					
Sus. Vol. Solids, mg/l	70	71	33					
Total Phosphorus, mg/l P	3.11		2.96					
Fecal Coli, #/100 ml	620,000		5					
pH	7.60		7.50					
Temperature, ^{o}C								

Table D4. ANALYTICAL RESULTS FOR RUN NO. 4

May 8, 1973

Site	Rainfall, cm
Racine Zoo, NE side	nm
Fire House, NW side	nm
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	50	55	32					
Dissolved BOD, mg/l	21		25					
TOC, mg/l	37	53	33					
DOC, mg/l	20		23					
Total Solids, mg/l								
Suspended Solids, mg/l	58	110	45					
Sus. Vol. Solids, mg/l	45	66	29					
Total Phosphorus, mg/l P								
Fecal Coli, #/100 ml	770,000		0					
pH	7.8		7.55					
Temperature, ^{o}C								

Table D5. ANALYTICAL RESULTS FOR RUN NO. 5

May 25, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.02
Fire House, NW side	0.89
Police Building, near south side	1.14

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	68	26	16	39		11	6	4
Dissolved BOD, mg/l	8		12	11		12		
TOC, mg/l	52	23	18	33		10	14	7
DOC, mg/l	12		11	15		9		
Total Solids, mg/l	439		286					
Suspended Solids, mg/l	208	115	59	382		90	55	59
Sus. Vol. Solids, mg/l	78	47	17	76		13		
Total Phosphorus, mg/l P	1.80		0.65	0.93		0.20	0.35	0.099
Fecal Coli, #/100 ml	70,000		<2				<1	250
pH	7.4		7.1	8.0		6.0	7.7	8.0
Temperature, °C								

Table D6. ANALYTICAL RESULTS FOR RUN NO. 6

May 27, 1973

Site	Rainfall, cm
Racine Zoo, NE side	2.08
Fire House, NW side	2.54
Police Building, near south side	2.92

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	70	30	29	14	19	5	3	2
Dissolved BOD, mg/l	5		15	2		4		
TOC, mg/l	68	56	37	18	25	12	7	27
DOC, mg/l	14		20	12		8		
Total Solids, mg/l	561		416	566		371		
Suspended Solids, mg/l	314	142	136	160	142	54	105	270
Sus. Vol. Solids, mg/l	145	98	64	9	34	16		
Total Phosphorus, mg/l P	3.33		1.99	0.70		0.27	0.17	0.28
Fecal Coli, #/100 ml	670,000		60	18,000		<1	<1	<1
pH	7.55		7.50			3.5	7.95	8.05
Temperature, ^{o}C	15		14.5	17.0		16.0	15.5	14.5

Table D7. ANALYTICAL RESULTS FOR RUN NO.7

June 5, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.07
Fire House, NW side	1.27
Police Building, near south side	0.81

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	79	79	23					
Dissolved BOD, mg/l	15		15					
TOC, mg/l	97	66	30					
DOC, mg/l	18		17					
Total Solids, mg/l	632		343					
Suspended Solids, mg/l	378	380	52					
Sus. Vol. Solids, mg/l	155	142	17					
Total Phosphorus, mg/l P	3.80		1.32					
Fecal Coli, #/100 ml	1,000,000		50					
pH	7.45	7.25	7.35					
Temperature, ^{o}C	21		19					

Table D8. ANALYTICAL RESULTS FOR RUN NO. 8
June 15, 1973

Site	Rainfall, cm
Racine Zoo, NE side	0.38
Fire House, NW side	0.46
Police Building, near south side	0.56

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	86	74	63	106		30		
Dissolved BOD, mg/l	20		44	21		24		
TOC, mg/l	79	63	53	63		42		
DOC, mg/l	25		36	22		25		
Total Solids, mg/l	575		504	524		378		
Suspended Solids, mg/l	159	92	38	152		66		
Sus. Vol. Solids, mg/l	47	19	6	24		5		
Total Phosphorus, mg/l P	4.19		2.04	2.31		1.39		
Fecal Coli, #/100 ml	1,250,000		<14	260,000		<14		
pH	7.41		7.44	7.40		7.62		
Temperature, ^{o}C	21		21	22		21		

Table D9. ANALYTICAL RESULTS FOR RUN NO. 9

June 16, 1973

Site	Rainfall, cm
Racine Zoo, NE side	0.71
Fire House, NW side	0.56
Police Building, near south side	0.51

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	55	48	43					
Dissolved BOD, mg/l	13		22					
TOC, mg/l	66	49	29					
DOC, mg/l	21		21					
Total Solids, mg/l	552		485					
Suspended Solids, mg/l	126	18	6					
Sus. Vol. Solids, mg/l	14	2	0					
Total Phosphorus, mg/l P	2.59		1.03					
Fecal Coli, #/100 ml	460,000		<2					
pH	7.5	7	7.5					
Temperature, ^{o}C	20		18					

Table D10. ANALYTICAL RESULTS FOR RUN NO. 10

July 2, 1973

Site	Rainfall, cm
Racine Zoo, NE side	0.76
Fire House, NW side	0.97
Police Building, near south side	0.89

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	176	127	148					
Dissolved BOD, mg/l	27		48					
TOC, mg/l	120	90	96					
DOC, mg/l	20		25					
Total Solids, mg/l	992		725					
Suspended Solids, mg/l	624	355	353					
Sus. Vol. Solids, mg/l	234		168					
Total Phosphorus, mg/l P	5.37		2.38					
Fecal Coli, #/100 ml	2,000,000		13,000					
pH	7.35	7.1	7.25					
Temperature, ^{o}C								

Table D11. ANALYTICAL RESULTS FOR RUN NO. 11

July 3, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.14
Fire House, NW side	1.23
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	75	46	40					
Dissolved BOD, mg/l	35		48					
TOC, mg/l	79	41	40					
DOC, mg/l	17		24					
Total Solids, mg/l	489	413	407					
Suspended Solids, mg/l	309	180	157					
Sus. Vol. Solids, mg/l	149	80	59					
Total Phosphorus, mg/l P	1.82		3.51					
Fecal Coli, #/100 ml	3,300,000		<7					
pH	7.35	6.9	7.05					
Temperature, ^{o}C								

Table D12. ANALYTICAL RESULTS FOR RUN NO. 12

July 20, 1973

Site	Rainfall, cm
Racine Zoo, NE side	3.86
Fire House, NW side	5.33
Police Building, near south side	2.08

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	116	44	17	49	12	21		
Dissolved BOD, mg/l	16		23	27		34		
TOC, mg/l	107	64	24	71	20	28		
DOC, mg/l	22		19	22		21		
Total Solids, mg/l	508		380	737		264		
Suspended Solids, mg/l	270	232	58	509	131	110		
Sus. Vol. Solids, mg/l	120	78	18	90	13	14		
Total Phosphorus, mg/l P	2.98		1.04	2.13		0.66		
Fecal Coli, #/100 ml	2,300,000		300	1,650,000		<10		
pH	7.38		7.30	7.78		7.70		
Temperature, ^{o}C								

Table D13. ANALYTICAL RESULTS FOR RUN NO. 13

September 4, 1973

Site	Rainfall, cm
Racine Zoo, NE side	3.10
Fire House, NW side	4.70
Police Building, near south side	3.35

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	348	109	50	44	25	15	5	5
Dissolved BOD, mg/l	30		20	17		19		
TOC, mg/l	780	100	37	33	33	21	19	32
DOC, mg/l	17		13	13		14		
Total Solids, mg/l	1,642		428	518		434		
Suspended Solids, mg/l	1,326	285	270	391	189	175	159	346
Sus. Vol. Solids, mg/l	976		61	97		50		
Total Phosphorus, mg/l P	7.70		2.17	1.66		0.84	0.23	0.38
Fecal Coli, #/100 ml	5,500,000		410,000	360,000		31,000	17,000	14,000
pH	7.15		7.38	7.5		7.3	7.95	8.00
Temperature, ^{o}C								

Table D14. ANALYTICAL RESULTS FOR RUN NO. 14

September 17, 1973

Site	Rainfall, cm
Racine Zoo, NE side	2.29
Fire House, NW side	2.54
Police Building, near south side	2.79

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	75		42	68	40	37	6	4
Dissolved BOD, mg/l	15		27	21		24		
TOC, mg/l	70		37	54		44	31	10
DOC, mg/l	35		22	17		18		
Total Solids, mg/l	484		394	576		431		
Suspended Solids, mg/l	274	222	76	315	302	242	423	106
Sus. Vol. Solids, mg/l	139		34	82		75		
Total Phosphorus, mg/l P	2.65		2.40	1.57		1.06	0.29	0.16
Fecal Coli, #/100 ml	1,240,000		<70	60,000		<70	<70	<70
pH	7.45		7.45	7.35		7.35	8.05	7.45
Temperature, ^{o}C								

Table D15. ANALYTICAL RESULTS FOR RUN NO. 15

September 21, 1973

Site	Rainfall, cm
Racine Zoo, NE side	0.64
Fire House, NW side	0.71
Police Building, near south side	0.38

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	113	83	66	53	42	22		
Dissolved BOD, mg/l	20		30	18		20		
TOC, mg/l	80	48	43	32	25	17		
DOC, mg/l	12		13	8		10		
Total Solids, mg/l	505		375	484		421		
Suspended Solids, mg/l	251	229	132	209	163	46		
Sus. Vol. Solids, mg/l	148		66	69		7		
Total Phosphorus, mg/l P	4.36		3.32	2.12		0.76		
Fecal Coli, #/100 ml								
pH	7.60		7.35	7.80		7.45		
Temperature, °C								

Table D16. ANALYTICAL RESULTS FOR RUN NO. 16

September 24, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.57
Fire House, NW side	1.40
Police Building, near south side	1.52

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	63	66	27				5	8
Dissolved BOD, mg/l	28		29					
TOC, mg/l	66		31				12	16
DOC, mg/l	30		27					
Total Solids, mg/l	433		293					
Suspended Solids, mg/l	145	173	42				76	0.25
Sus. Vol. Solids, mg/l	45		3					
Total Phosphorus, mg/l P	2.80		1.34				0.21	0.25
Fecal Coli, #/100 ml	1,180,000		1,500				4,800	4,600
pH	7.35		6.95				7.95	7.60
Temperature, ^{o}C								

Table D17. ANALYTICAL RESULTS FOR RUN NO. 17

September 28, 1973

Site	Rainfall, cm
Racine Zoo, NE side	3.76
Fire House, NW side	nm
Police Building, near south side	3.43

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	94	58	20				10	4
Dissolved BOD, mg/l	21		25					
TOC, mg/l	103	53	22				36	15
DOC, mg/l	17		18					
Total Solids, mg/l	800		312					
Suspended Solids, mg/l	663	181	52				383	104
Sus. Vol. Solids, mg/l	388		31					
Total Phosphorus, mg/l P	4.18		0.82				0.82	0.31
Fecal Coli, #/100 ml	1,240,000		16				<3500	<1400
pH	7.60		7.50				7.95	7.70
Temperature, ^{o}C								

Table D18. ANALYTICAL RESULTS FOR RUN NO. 18

October 12, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.73
Fire House, NW side	1.98
Police Building, near south side	1.47

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	116	80	45	35		16		
Dissolved BOD, mg/l	21		30	17		22		
TOC, mg/l	96	77	52	54		17		
DOC, mg/l	21		13	11		13		
Total Solids, mg/l	745		317	515		299		
Suspended Solids, mg/l	602	209	103	344		111		
Sus. Vol. Solids, mg/l	276		41	45		40		
Total Phosphorus, mg/l P	4.43		1.73	1.91		0.51		
Fecal Coli, #/100 ml	550,000		480,000	230,000		420		
pH	7.22		7.25	6.95		5.95		
Temperature, ^{o}C	20		22					

Table D19. ANALYTICAL RESULTS FOR RUN NO. 19

October 27, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.47
Fire House, NW side	1.78
Police Building, near south side	1.52

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	90	169	78	66	61	20	64	33
Dissolved BOD, mg/l	31		20	21		21		
TOC, mg/l	62	143	52	38	53	22	46	26
DOC, mg/l	24		30	21		20	41	27
Total Solids, mg/l	539		519	723		368		
Suspended Solids, mg/l	168	388	154	498	375	59	156	75
Sus. Vol. Solids, mg/l	112		90	139		20		
Total Phosphorus, mg/l P	4.40		3.62	1.98		0.37	0.21	0.11
Fecal Coli, #/100 ml	7,300,000		27,000	430,000		40	310	160
pH	7.60		7.53	7.20		6.10	7.63	7.45
Temperature, ^{o}C	14		14					

Table D20. ANALYTICAL RESULTS FOR RUN NO. 20

October 31, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.32
Fire House, NW side	1.57
Police Building, near south side	1.40

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	72	85	45	43	40	33	16	14
Dissolved BOD, mg/l	25		21	20		28	7	9
TOC, mg/l	51	56	42	39	37	35	19	19
DOC, mg/l	18		19	17		20	8	11
Total Solids, mg/l	364		343	462		358		
Suspended Solids, mg/l	150	177	112	296	265	152	102	95
Sus. Vol. Solids, mg/l	89		54	61		26		
Total Phosphorus, mg/l P	3.82		1.12	1.70		1.88	0.098	0.12
Fecal Coli, #/100 ml	1,600,000		540,000	540,000		300	720	900
pH	7.65		7.42	7.65		7.20	7.68	7.92
Temperature, ^{o}C	11		10					

Table D21. ANALYTICAL RESULTS FOR RUN NO. 21

November 14, 1973

Site	Rainfall, cm
Racine Zoo, NE side	1.90
Fire House, NW side	2.29
Police Building, near south side	2.92

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	85	52	33	41	28	35	6	7
Dissolved BOD, mg/l	31		34	40		42	22	22
TOC, mg/l	58	36	28	37	27	30	12	8
DOC, mg/l	24		21	23		22	9	8
Total Solids, mg/l	417		316	442		314		
Suspended Solids, mg/l	179	68	127	290	188	187	171	97
Sus. Vol. Solids, mg/l	109	37	75	69	52	65	29	26
Total Phosphorus, mg/l P	5.43		1.03	0.64		0.75	0.21	0.085
Fecal Coli, #/100 ml	800,000		54,000	50,000		29,000	380	300
pH	7.2		7.05	7.35		7.45	7.95	7.70
Temperature, ^{o}C	11		11					

Table D22. ANALYTICAL RESULTS FOR RUN NO. 22

December 4, 1973

Site	Rainfall, cm
Racine Zoo, NE side	2.84
Fire House, NW side	3.56
Police Building, near south side	3.30

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	48	66	30					
Dissolved BOD, mg/l	15		13				<4	5
TOC, mg/l	52	72	33	29		21	18	8
DOC, mg/l	21		18				8	19
Total Solids, mg/l	424		352					7
Suspended Solids, mg/l	155	214	109	250		197	128	245
Sus. Vol. Solids, mg/l	51	87	36	41		29	12	35
Total Phosphorus, mg/l P	2.70		1.42	0.86		0.74	0.21	0.25
Fecal Coli, #/100 ml	1,240,000		940,000	147,000		280,000	240	340
pH	7.6		7.3	7.62		7.68	7.95	8.0
Temperature, °C	9.0		8.0					

Table D23 ANALYTICAL RESULTS FOR RUN NO. 23

March 28, 1974

Site	Rainfall, cm
Racine Zoo, NE side	nm
Fire House, NW side	nm
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	72	57	21				7	
Dissolved BOD, mg/l	10	10	12					
TOC, mg/l	93	76	43				43	
DOC, mg/l	12	14	15				7	
Total Solids, mg/l	515		375					
Suspended Solids, mg/l	213	269	62				245	330
Sus. Vol. Solids, mg/l	90		18					
Total Phosphorus, mg/l P	3.10		0.93				0.22	
Fecal Coli, #/100 ml	22,000		50				<14	50
pH	7.60	6.90	6.82				7.40	7.55
Temperature, ^{o}C								
Chlorides (mg/l)	52		90				58	98

Table D24. ANALYTICAL RESULTS FOR RUN NO. 24

April 3, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.57
Fire House, NW side	nm
Police Building, near south side	nm

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	97	43	25	196		15	39	22
Dissolved BOD, mg/l	16	10	10	28		23		
TOC, mg/l	171	51	20	316		29	180	59
DOC, mg/l	12	10	11	26		21	14	8
Total Solids, mg/l	843		398	1,371		434		
Suspended Solids, mg/l	519		69	1,160		164	1,400	496
Sus. Vol. Solids, mg/l	277		46	475		69		
Total Phosphorus, mg/l P	3.53		0.82	4.9		0.42	1.65	0.53
Fecal Coli, #/100 ml	105,000		72,000	106,000		55,000	<50	<50
pH	7.50	7.10	7.15	7.30		7.35	7.55	8.20
Temperature, °C								

Table 25. ANALYTICAL RESULTS FOR RUN NO.25

April 18, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.71
Fire House, NW side	nm
Police Building, near south side	0.61

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	52	60	33	116	35	51	19	20
Dissolved BOD, mg/l	42	24	37		30	69		
TOC, mg/l	89	82	42	76	68	51	57	59
DOC, mg/l	40	27	35	16	38	31	19	18
Total Solids, mg/l	580		559	586		576		
Suspended Solids, mg/l	123	174	72	239	474	111	223	233
Sus. Vol. Solids, mg/l	53		26	48		28		
Total Phosphorus, mg/l P	2.49		1.44	1.47		0.56	0.23	0.23
Fecal Coli, #/100 ml	38,000		<14	28,000		<14		
pH	7.70		7.00	7.80		3.90	7.85	8.00
Temperature, ^{o}C	10.0		11.0					

Table D26. ANALYTICAL RESULTS FOR RUN NO. 26

April 28, 1974

Site	Rainfall, cm
Racine Zoo, NE side	3.81
Fire House, NW side	4.17
Police Building, near south side	3.68

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	96	105	16	27	13	7	19	2
Dissolved BOD, mg/l	10	5	7	5	2	5		
TOC, mg/l	132	147	23	50	36	20	81	7
DOC, mg/l	11	8	9	8	5	8		
Total Solids, mg/l	758		354	747		379		
Suspended Solids, mg/l	334	630	53	508	285	170	846	60
Sus. Vol. Solids, mg/l	160		16	86		26		
Total Phosphorus, mg/l P	3.79		0.83	1.00		0.56	0.59	0.05
Fecal Coli, #/100 ml	420,000		11,200	187,000		<9	4,100	700
pH	6.90		6.95	7.60		7.10	7.90	7.80
Temperature, ^{o}C	16.0		15.0					

Table 27. ANALYTICAL RESULTS FOR RUN NO. 27
May 5, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.46
Fire House, NW side	0.46
Police Building, near south side	0.41

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	74	74	60	70	89	38	15	31
Dissolved BOD, mg/l	23	35	42	21	20	31		
TOC, mg/l	63	63	60	58	83	40	34	65
DOC, mg/l	27	30	38	22	16	28		
Total Solids, mg/l	556		576	581		384		
Suspended Solids, mg/l	151	117	93	206	401	87	70	101
Sus. Vol. Solids, mg/l	78		40	61		21		
Total Phosphorus, mg/l P	2.73		2.69	2.21		0.74	0.23	0.34
Fecal Coli, #/100 ml	3,130,000		60	1,020,000		70	3300	380
pH	7.65		7.85	7.65		7.55	7.75	7.50
Temperature, ^{o}C	12.0		12.0					

Table D28. ANALYTICAL RESULTS FOR RUN NO. 28

May 8, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.02
Fire House, NW side	1.22
Police Building, near south side	1.22

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	96	81	39	106	40	11	9	6
Dissolved BOD, mg/l	17	18	10	11	20	9		
TOC, mg/l	86	64	34	36	33	11	35	24
DOC, mg/l	20	21	19	16	17	14		
Total Solids, mg/l	597		466	743		363		
Suspended Solids, mg/l	183	99	50	522	228	22	160	56
Sus. Vol. Solids, mg/l	91		20	136		14		
Total Phosphorus, mg/l P	2.72		2.07	2.99		0.21	0.16	0.11
Fecal Coli, #/100 ml	2,000,000		<7	1,300,000		<7	330	220
pH	8.00		7.70	7.62		7.28	7.80	7.83
Temperature, ^{o}C								

Table B29. ANALYTICAL RESULTS FOR RUN NO. 29

May 11, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.57
Fire House, NW side	1.02
Police Building, near south side	0.76

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	79	66	36	106	55	20	24	7
Dissolved BOD, mg/l	16	22	22	14	21	16		
TOC, mg/l	79	59	41	140	60	20	107	18
DOC, mg/l	18	23	15	18	24	18		
Total Solids, mg/l	651		485	1,272		398		
Suspended Solids, mg/l	295	176	97	1,084	225	77	841	105
Sus. Vol. Solids, mg/l	145		42	300		20		
Total Phosphorus, mg/l P	3.13		1.55	4.14		0.93	0.58	0.19
Fecal Coli, #/100 ml	1,600,000		55	720,000		7	450	230
pH	7.50		7.45	7.35		7.45	7.82	7.60
Temperature, ^{o}C	12.0		11.5					

Table D30. ANALYTICAL RESULTS FOR RUN NO. 30

May 13, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.46
Fire House, NW side	0.51
Police Building, near south side	0.46

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	111	82	65	171	31	17	13	7
Dissolved BOD, mg/l	30	36	36	38	23	20		
TOC, mg/l	103	77	72	152	65	32	56	12
DOC, mg/l	28	29	36	30	19	16		
Total Solids, mg/l	617		480	1,155		396		
Suspended Solids, mg/l	301	220	183	729	338	65	574	102
Sus. Vol. Solids, mg/l	144		59	217		16		
Total Phosphorus, mg/l P	5.12		3.59	4.92		0.43	0.49	0.17
Fecal Coli, #/100 ml	200,000		1,400	240,000		<1,000	390	230
pH	7.40		7.60	7.60		4.50		
Temperature, ^{o}C	11.0		11.0					

Table D31. ANALYTICAL RESULTS FOR RUN NO. 31

May 14, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.07
Fire House, NW side	1.40
Police Building, near south side	1.52

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	65	53	32	95	74	30	7	9
Dissolved BOD, mg/l	21	15	18	61	56	28		
TOC, mg/l	40	39	40	66	44	24	18	23
DOC, mg/l	18	16	14	29	34	23		
Total Solids, mg/l	488		469	538		384		
Suspended Solids, mg/l	155	161	82	314	189	133	137	113
Sus. Vol. Solids, mg/l	77		34	100		37		
Total Phosphorus, mg/l P	2.54		1.73	1.66		0.78	0.14	0.17
Fecal Coli, #/100 ml	400,000		<7	470,000		4,200	410	1,000
pH	7.60		7.54	7.55		7.45		
Temperature, ^{o}C	15.0		15.0					

Table D32. ANALYTICAL RESULTS FOR RUN NO. 32

May 16, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.83
Fire House, NW side	1.83
Police Building, near south side	1.70

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	99	52	12	62	24	39	6	5
Dissolved BOD, mg/l	20	16	11	18	18	24		
TOC, mg/l	84	65	33	40	23	32	14	15
DOC, mg/l	19	17	21	15	15	17		
Total Solids, mg/l	641		579	462		573		
Suspended Solids, mg/l	224	188	72	176	140	208	121	149
Sus. Vol. Solids, mg/l	96		21	26		42		
Total Phosphorus, mg/l P	2.97		1.23	1.07		1.07	0.21	0.11
Fecal Coli, #/100 ml	750,000		28	3,300,000		220,000	470	160
pH	7.75		7.60	7.35		7.30	7.40	7.60
Temperature, °C	11.0		11.5					

Table 33. ANALYTICAL RESULTS FOR RUN NO. 33

May 16, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.46
Fire House, NW side	0.51
Police Building, near south side	0.46

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l								
Dissolved BOD, mg/l								
TOC, mg/l								
DOC, mg/l								
Total Solids, mg/l								
Suspended Solids, mg/l								
Sus. Vol. Solids, mg/l								
Total Phosphorus, mg/l P								
Fecal Coli, #/100 ml								
pH								
Temperature, ^{o}C								

Table D34. ANALYTICAL RESULTS FOR RUN NO. 34

May 21, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.64
Fire House, NW side	1.14
Police Building, near south side	0.25

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	150		62	58	92	45	23	19
Dissolved BOD, mg/l	28		20	30	21	21		
TOC, mg/l	128		24	230	82	24	78	40
DOC, mg/l	18		17	17	19	14		
Total Solids, mg/l	854		488	2297		476		
Suspended Solids, mg/l	577		113	2070	1098	200	660	388
Sus. Vol. Solids, mg/l	372		40	464		29		
Total Phosphorus, mg/l P	4.86		1.75	5.62		1.15		
Fecal Coli, #/100 ml	850,000		520,000	900,000		390,000	800	165
pH	7.70		7.90	8.20		7.90	8.35	8.15
Temperature, °C								

Table D35. ANALYTICAL RESULTS FOR RUN NO. 35

May 21, 1974

Site	Rainfall, cm
Racine Zoo, NE side	2.08
Fire House, NW side	2.29
Police Building, near south side	1.02

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	59	50	22	89	70	17	17	
Dissolved BOD, mg/l	21	14	6		27	13		
TOC, mg/l	40	26	36	168	88	18	48	
DOC, mg/l	25	14	15	11	22	17		
Total Solids, mg/l	488		477	2,558		421		
Suspended Solids, mg/l	197	123	113	1,766	989	189	299	
Sus. Vol. Solids, mg/l	94		40	335		42		
Total Phosphorus, mg/l P	2.31		2.03	3.54		0.86		
Fecal Coli, #/100 ml	730,000		35	280,000		420,000	710	
pH	7.68		7.90	7.70		7.90	8.10	
Temperature, ^{o}C	16.0		16.0					

Table D36. ANALYTICAL RESULTS FOR RUN NO. 36

June 6, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.61
Fire House, NW side	0.89
Police Building, near south side	0.51

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	62		25					
Dissolved BOD, mg/l	18		25					
TOC, mg/l	50		16					
DOC, mg/l	17		14					
Total Solids, mg/l	555		464					
Suspended Solids, mg/l	159		56					
Sus. Vol. Solids, mg/l	79		24					
Total Phosphorus, mg/l P	2.51		0.66					
Fecal Coli, #/100 ml								
pH	7.40		7.30					
Temperature, ^{o}C	18.5		17.5					

Table 37. ANALYTICAL RESULTS FOR RUN NO. 37
June 6, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.42
Fire House, NW side	1.57
Police Building, near south side	1.40

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	138	106	38	41	29	25		
Dissolved BOD, mg/l	16	19	23	21	6	17		
TOC, mg/l	109	68	19	46	10	27		
DOC, mg/l	14	13	18	23	6	11		
Total Solids, mg/l	795		574	768		577		
Suspended Solids, mg/l	437	245	79	355	65	149		
Sus. Vol. Solids, mg/l	236		24	147		41		
Total Phosphorus, mg/l P	4.01		1.34	1.85		0.69		
Fecal Coli, #/100 ml	900,000		46,000	700,000		220,000		
pH	7.25		7.45	7.25		6.60		
Temperature, ^{o}C	18.5		18.5					

Table D38. ANALYTICAL RESULTS FOR RUN NO. 38

June 9, 1974

Site	Rainfall, cm
Racine Zoo, NE side	2.41
Fire House, NW side	2.08
Police Building, near south side	2.29

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	55	32	13	40	15	8	6	9
Dissolved BOD, mg/l	12	12	13	14	12	12		
TOC, mg/l	91	14	24	55	28	7	36	40
DOC, mg/l	18	16	18	20	18	7		
Total Solids, mg/l	622		462	484		363		
Suspended Solids, mg/l	230	132	37	173	66	38	354	403
Sus. Vol. Solids, mg/l	89		15	40		6		
Total Phosphorus, mg/l P	1.86		0.46	1.49		0.28	0.31	0.27
Fecal Coli, #/100 ml	900,000		1,600	155,000		150,000	1,500	1,600
pH	7.45		7.32	7.60		7.52	6.90	6.90
Temperature, ^{o}C	15.5		15.5					

Table D39. ANALYTICAL RESULTS FOR RUN NO. 39

June 11, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.20
Fire House, NW side	0.30
Police Building, near south side	0.71

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	58	53	36	58	41	10	15	14
Dissolved BOD, mg/l	41	42	40	48	37	37		
TOC, mg/l	60	60	47	83	57	22	55	39
DOC, mg/l	40	39	39	41	25	25		
Total Solids, mg/l	542		522	507		556		
Suspended Solids, mg/l	94	113	79	380	317	66	304	205
Sus. Vol. Solids, mg/l	41		32	94		14		
Total Phosphorus, mg/l P	2.58		1.80	1.65		0.57	0.41	0.22
Fecal Coli, #/100 ml	1,450,000		37,000	30,000		230,000	13,300	3,300
pH	7.65		7.15	7.70		6.85	7.95	7.65
Temperature, ^{o}C	17.0		17.0					

Table D40. ANALYTICAL RESULTS FOR RUN NO. 40

July 3, 1974

Site	Rainfall, cm
Racine Zoo, NE side	2.29
Fire House, NW side	2.21
Police Building, near south side	2.54

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	115		42	70	84	29	14	14
Dissolved BOD, mg/l	23		33	32	24	28		
TOC, mg/l	232		60	130	51	34	48	34
DOC, mg/l	22		30	30	27	30		
Total Solids, mg/l	1,066		475	1,144		330		
Suspended Solids, mg/l	559		136	821	673	105	967	513
Sus. Vol. Solids, mg/l	250		46	194		25		
Total Phosphorus, mg/l P	375		1.87	3.70		0.79	0.60	0.46
Fecal Coli, #/100 ml	910,000		28,000	97,000			1,400	4,400
pH	7.05		7.15	7.15	6.90	6.85	7.20	7.30
Temperature, °C	22.0		22.0					

Table D41. ANALYTICAL RESULTS FOR RUN NO. 41

July 10, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.47
Fire House, NW side	0.89
Police Building, near south side	1.07

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	43	33	18	510	131	28	16	17
Dissolved BOD, mg/l	22	27	20	>86	>86	39		
TOC, mg/l	56	45	24	459	115	27	86	39
DOC, mg/l	17	18	18	243	61	27		
Total Solids, mg/l	733		368	1,868		405		
Suspended Solids, mg/l	129	80	37	928	336	46	653	201
Sus. Vol. Solids, mg/l	49		16	287		19		
Total Phosphorus, mg/l P	2.55		0.87	4.06		0.38	0.24	0.17
Fecal Coli, #/100 ml	420,000		<7	1,600,000		<7	21,000	
pH	7.45		7.25	6.72		6.15	7.25	7.15
Temperature, °C	21.5		21.0					

Table D42. ANALYTICAL RESULTS FOR RUN NO. 42

July 22, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.76
Fire House, NW side	0.66
Police Building, near south side	0.91

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	256	34	59	60	22	38	33	20
Dissolved BOD, mg/l	32	28	49	40		23		
TOC, mg/l	195	55	59	76	52	35	103	38
DOC, mg/l	31	19	37	33	24	33		
Total Solids, mg/l	826		473	769		441		
Suspended Solids, mg/l	344	169	173	269	191	63	1,144	183
Sus. Vol. Solids, mg/l	165		111	127		33		
Total Phosphorus, mg/l P	4.15		1.96	2.57		0.29	0.74	0.27
Fecal Coli, #/100 ml	740,000		133,000	713,000		180		270
pH	7.10		6.95	6.90		5.70	7.20	7.30
Temperature, ^{o}C	20.0		19.5					

Table 43. ANALYTICAL RESULTS FOR RUN NO. 43

July 25, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.38
Fire House, NW side	0.51
Police Building, near south side	0.25

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	101	75	66	161	124	43	18	34
Dissolved BOD, mg/l								
TOC, mg/l	51	58	38	86	85	36	21	48
DOC, mg/l	21	17	18	15	19	25		
Total Solids, mg/l	551		389	1,098		456		
Suspended Solids, mg/l	220	160	83	571	377	50	147	40
Sus. Vol. Solids, mg/l	79		28	140		10		
Total Phosphorus, mg/l P	3.35		1.85	3.51		0.72	0.30	0.33
Fecal Coli, #/100 ml	2,900,000		70,000	4,400,000		1,000	900	1,000
pH	7.10		7.15	7.61		6.71	7.10	7.11
Temperature, °C	23.0		21.5					

Table D44. ANALYTICAL RESULTS FOR RUN NO. 44

August 10, 1974

Site	Rainfall, cm
Racine Zoo, NE side	0.33
Fire House, NW side	0.13
Police Building, near south side	0.25

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	88	60	58				36	
Dissolved BOD, mg/l	25	21	36					
TOC, mg/l	81	76	46				76	
DOC, mg/l	28	32	32					
Total Solids, mg/l	558		381					
Suspended Solids, mg/l	200	211	69				356	
Sus. Vol. Solids, mg/l	137		54					
Total Phosphorus, mg/l P	2.07		1.30				0.45	
Fecal Coli, #/100 ml	1,600,000		<2,800				1,700	
pH	7.45		7.40				7.55	
Temperature, °C	21.5		21.0					

Table D45. ANALYTICAL RESULTS FOR RUN NO. 45

August 16, 1974

Site	Rainfall, cm
Racine Zoo, NE side	1.32
Fire House, NW side	1.27
Police Building, near south side	1.65

	Site I			Site II			Site IIA	
	Raw	Screened effluent	Final	Raw	Screened effluent	Final	Raw	Final
Total BOD, mg/l	87	107	41	49	67	32	12	11
Dissolved BOD, mg/l	18	26	25	18	18	28		
TOC, mg/l	63	41	40	45	58	26	23	21
DOC, mg/l	23	26	25	18	17	25		
Total Solids, mg/l	731		579	472		409		
Suspended Solids, mg/l	218	189	89	293	412	76	301	205
Sus. Vol. Solids, mg/l	155		64	113		52		
Total Phosphorus, mg/l P	2.82		1.44	1.48		0.63	0.22	0.20
Fecal Coli, #/100 ml	1,400,000		<7	800,000		<7	2,300	48,000
pH	6.95		6.60	6.90		6.65	7.05	7.20
Temperature, ^{o}C	21.5		21.0					

APPENDIX IV-E
DESCRIPTION OF ANALYTICAL TECHNIQUES

Chlorides

1971, --
1973, WQO, p. 29.
1974, WQO, p. 29.
(Mercuric Nitrate Titration)

Suspended Solids

1971, FWPCA, p. 265, (glass fiber method) and membrane filter method as described below.

1. Wash a membrane filter (Metricel GA-6 or equivalent nominal pore diameter-0.47 micron) with 100 ml distilled water using a Millipore filter apparatus. Place the filter in a numbered aluminum tin and dry at 103°C for one hour. Cool 30 minutes in a desiccator and obtain tare weight.

2. Place the filter on a filter apparatus and add a suitable aliquot of well mixed sample. Apply vacuum. Wash with minimum of 10 ml distilled water.

3. Transfer filter to a dry, tared aluminum dish and dry one hour at 103°C.

4. Cool in desiccator for 30 minutes and weigh.

$$\text{Suspended Solids (mg/l)} = \frac{\text{mg residue} \times 1000}{\text{ml sample}}$$

1973 Treatment plant samples: membrane filter method as described above. River Samples: WQO, p. 278, glass fiber mat method.

1974 Treatment plant samples (composite): membrane filter method as described above. Treatment plant samples (discrete): WQO, p. 278, glass fiber mat. Fiber samples, WQO, p. 278, glass fiber mat.

Volatile Suspended Solids

1971
1973 } Membrane Filter Method as described below.

1. Ignite a porcelain crucible at 600°C for 15 min.
2. Cool in desiccator 45 min. to determine the tare weight.
3. Place the membrane filter containing the residue from the suspended solids analysis in the crucible. Char the filter over a bunsen burner, then place in a muffle furnace at 600°C for 15 min.
4. Cool in desiccator 45 min. and weigh

$$\text{Volatile Sus. Solids(mg/l)} = \frac{\text{mg residue} \times 1000}{\text{mls sample}}$$

1974 --

Ortho-Phosphate	1971, SM, 12th Ed., p. 230 (ANS Method) 1973, -- 1974, --
Total Phosphate	1971 1973 1974 } Persulfate digestion and ANS method as described below.

1. Place 0.71 g potassium persulfate (or 0.6 g ammonium persulfate) in a 125 ml Erlenmeyer flask.

2. Add suitable aliquot of sample (50 ml or less) to flask. Duplicate flasks should be run for each sample using different aliquots in each flask. Differences in results between the two flasks may indicate incomplete digestion. If incomplete digestion is suspected, rerun using a smaller aliquot.

3. Add 15 ml N/1 sulfuric acid to each flask. Cover with aluminum foil and digest in autoclave at 121°C for 30 minutes.

4. Cool and neutralize to pink color with 10 N sodium hydroxide.

5. Discharge pink color with N/1 sulfuric acid. Add an additional 2 ml of N/1 sulfuric acid.

6. Filter contents of flask through Whatman #40 paper collecting the filtrate in a 100 ml volumetric flask. Wash flask and filters thoroughly. Bring to volume and mix.

7. Determine ortho-phosphate using the ANS procedure (SM, 12th Ed., p. 230).

BOD	1971, SM, 13th Ed., p. 489. 1973, SM, 13th Ed., p. 489. 1974, SM, 13th Ed., p. 489 (DO measured with probe)
Ammonia Nitrogen	1971, FWPCA, p. 127. 1973, WQO, p. 134. 1974, WQO, p. 134 (Distillation using borate buffer).

Organic Nitrogen	1971, FWPCA, p. 145. 1973, WQO, p. 149. 1974, WQO, p. 149. (Digestion, distillation, titration)
Total Solids	1971, SM, 13th Ed., p. 535. 1973, SM, 13th Ed., p. 535. 1974, SM, 13th Ed., p. 535 (Dried at 105°C)
Total Volatile Solids	1971, SM, 13th Ed., p. 536. 1973, SM, 13th Ed., p. 536. 1974, SM, 13th Ed., p. 536. (Ashed at 550°C)
Chlorine Residual	1971, -- 1973, SM, 13th Ed., p. 110. 1973, SM, 13th Ed., p. 110 (Iodometric titration)
Turbidity	1971, -- 1973, -- 1974, WQO, p. 310 (Hach Model 2100A turbidimeter)
Specific Conductance	1971, -- 1973, -- 1973, WQO, p. 284. (Industrial Instruments RC16 Conductivity Bridge)
Hydrocarbons (Oil & Grease)	1971, -- 1973, SM, 13th Ed., p. 254. 1974, SM, 13th Ed., p. 254.

APPENDIX IV-F

SITE TREATMENT/BYPASS VOLUMES
MAY TO SEPTEMBER, 1974

Table F1. MAY, 1974
TREATMENT/BYPASS RECORD

Date	Run No.	Site I Vol. Treated cu m	Site I Vol. Treated gal.x10^3	Site I Vol. Bypassed cu m	Site I Vol. Bypassed gal.x10^3	Site II Vol. Treated cu m	Site II Vol. Treated gal.x10^3	Site II Vol. Bypassed cu m	Site II Vol. Bypassed gal.x10^3
1									
2									
3									
4									
5	27	946	250			1,173	310		
6									
7									
8	28	2,612	690	749	198	5,413	1,430	1,136	300
9				79	21				
10									
11	29	3,369	890	6,980	1,844	6,321	1,670	21,953	5,800
12				8,690	2,296				
13	30	2,536	670	4,550	1,202	3,066	810	10,598	2,800
14	31	17,570	4,642	5,791	1,530	17,865	4,720	1,892	500
15	31	6,995	1,848	34	9				
16	32-33	27,161	7,176	587	155	27,290	7,210	14,004	3,700
17	33	10,386	2,744	8,039	2,124	11,317	2,990	757	200
18				3,463	915			1,892	500
19				64	17				
20				276	73				
21	34-35	11,904	3,145	1,408	372	16,503	4,360	7,948	2,100
22	35	25,666	6,781	57	15			102,952	27,200
23	35	2,286	604	5,693	1,504			31,416	8,300
24				1,291	341				
25									
26									
27									
28		378	100	2,271	600	1,249	330	24,338	6,430
29				1,582	418			24,110	6,370
30									
31									

Table F2. JUNE, 1974
TREATMENT/BYPASS RECORD

Date	Run No.	Site I				Site II			
		Vol. Treated		Vol. Bypassed		Vol. Treated		Vol. Bypassed	
		cu m	gal.x10^3	cu m	gal.x10^3	cu m	gal.x10^3	cu m	gal.x10^3
1									
2									
3									
4									
5									
6	36-37	8,062	2,130	341	90	5,905	1,560		
7	37	151	40	2,063	545			1,703	450
8	38			3,032	801	9,879	2,610	5,678	1,500
9	38	15,254	4,030	14,205	3,753	4,050	1,070	88,758	23,450
10				16,177	4,274			35,200	9,300
11	39	1,665	440	3,800	1,004	2,044	540		
12				2,165	572			3,028	800
13				2,263	598				
14				1,185	313				
15				2,415	638	2,612	690		
16				19	5				
17				352	93			1,136	300
18				356	94				
19				129	34				
20				1,162	307			12,945	3,420
21				1,707	451			8,630	2,280
22									
23									
24									
25									
26									
27									
28									
29									
30									

Table F3. JULY, 1974
TREATMENT/BYPASS RECORD

Date	Run No.	Site I				Site II			
		Vol. Treated		Vol. Bypassed		Vol. Treated		Vol. Bypassed	
		cu m	gal.x10^3	cu m	gal.x10^3	cu m	gal.x10^3	cu m	gal.x10^3
1									
2		303	80			492	130		
3	40	2,952	780	284	75	3,671	970	2,650	700
4	40	4,277	1,130			3,406	900		
5									
6									
7									
8									
9		3,369	890			3,936	1,040	2,271	600
10	41	5,223	1,380			9,841	2,600		
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22	42	1,892	500			2,536	670	757	200
23									
24									
25	43	908	240			1,703	450		
26									
27									
28									
29									
30									
31									

Table F4. AUGUST, 1974
TREATMENT/BYPASS RECORD

Date	Run No.	Site I Vol. Treated cu m	Site I Vol. Treated gal.x10^3	Site I Vol. Bypassed cu m	Site I Vol. Bypassed gal.x10^3	Site II Vol. Treated cu m	Site II Vol. Treated gal.x10^3	Site II Vol. Bypassed cu m	Site II Vol. Bypassed gal.x10^3
1									
2									
3									
4									
5									
6									
7									
8									
9									
10	44	643	170						
11									
12									
13									
14									
15									
16	45	4,958	1,310			6,170	1,630		
17									
18									
19									
20									
21									
22									
23									
24									
25									
26						568	150	8,327	2,200
27		1,079	285						
28									
29									
30								7,192	1,900
31				257	68				

Table F5. SEPTEMBER, 1974
TREATMENT/BYPASS RECORD

Date	Run No.	Site I Vol. Treated cu m	Site I Vol. Treated gal.x10^3	Site I Vol. Bypassed cu m	Site I Vol. Bypassed gal.x10^3	Site II Vol. Treated cu m	Site II Vol. Treated gal.x10^3	Site II Vol. Bypassed cu m	Site II Vol. Bypassed gal.x10^3
1									
2									
3						341	90		
4								1,514	400
5								37,850	10,000
6								42,770	11,300
7								36,336	9,600
8								10,976	2,900
9								41,635	11,000
10									
11									
12						189	50		
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26								378	100
27									
28				151	40			3,406	900
29									
30									

APPENDIX IV-G

POLLUTIONAL MASS REMOVALS ACHIEVED BY TREATMENT SITES

Table G1. MASS REMOVAL OF BOD - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	2180	50	31	109	68	38	109	68	37.6
2	9500	10	13	95	124	-31	204	192	5.9
3	3785	43	41	163	155	5	367	347	5.4
4	4920	50	32	246	157	36	613	504	17.8
5	2952	68	16	201	86	76	814	590	27.5
6	11961	70	29	837	347	59	1651	937	43.2
7	6397	79	23	505	147	71	2156	1084	49.7
8	2271	86	63	195	143	27	2351	1227	47.8
9	12453	55	43	685	535	22	3036	1762	42.0
10	3482	176	148	613	515	16	3649	2277	37.6
11	6132	75	40	460	245	47	4109	2522	38.6
12	21907	116	17	1497	219	57	5606	2741	51.1
13	2347	348	50	817	117	86	6423	2858	55.5
14	7684	75	42	576	323	44	6999	3181	54.6
15	643	113	66	73	42	41	7072	3223	54.4
16	7078	63	27	446	191	57	7518	3414	54.6
17	16540	94	20	1555	331	79	9073	3745	58.7
18	2498	116	45	290	112	61	9363	3857	58.8
19	3142	90	78	283	245	13	9646	4102	57.5
20	7116	72	45	512	320	37	10158	4422	56.5
21	7843	85	33	667	259	61	10825	4681	56.8
22	43944	48	30	2109	1318	38	12934	5999	53.6
23	4769	72	21	343	100	71	13277	6099	54.1
24	7684	97	25	745	192	74	14022	6291	55.1
25	3899	52	33	203	129	36	14225	6420	54.9
26	32135	96	16	3085	514	83	17310	6934	59.9
27	946	74	60	70	57	19	17380	6991	59.8
28	2612	96	39	251	102	59	17631	7093	59.8
29	3369	79	36	266	121	54	17897	7214	59.5

Table G1 (continued).

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
30	2536	111	65	281	165	41	18178	7379	59.4
31	24565	65	32	1597	786	51	19775	8165	58.7
32	21574	99	12	2136	259	88	21911	8424	61.6
33	15973	--	--	--	--	--	--	--	--
34	3217	150	62	483	199	59	22394	8623	61.5
35	36639	59	22	2162	806	63	24556	9429	61.6
36	1892	62	25	117	47	60	24673	9476	61.6
37	7684	138	38	1060	292	73	25733	9768	62.0
38	15254	55	13	839	198	76	26572	9966	62.5
39	1665	58	36	97	60	38	26669	10026	62.4
40	7229	115	42	831	304	64	27500	10330	62.4
41	5223	43	18	225	94	58	27725	10424	62.4
42	1892	256	59	484	112	77	28209	10536	62.7
43	908	101	66	92	60	35	28301	10596	62.6
44	643	88	58	57	37	34	28358	10633	62.5
45	4958	87	41	431	203	53	28789	10836	62.4
						50.1			62.4

Table G2. MASS REMOVAL OF BOD - SITE II

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	--	--	--	--	--	--	--	--	--
2	12226	11	7	134	86	36	134	86	35.8
3	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--
5	3823	39	11	149	42	72	283	128	54.8
6	43376	14	5	607	217	64	890	345	61.2
7	--	--	--	--	--	--	--	--	--
8	984	106	30	104	30	72	994	375	62.3
9	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
12	17108	49	21	838	359	57	1832	734	59.9
13	3217	44	15	142	48	66	1974	782	60.4
14	25549	68	37	1737	945	46	3711	1727	53.5
15	1249	53	22	66	27	59	3777	1754	53.6
16	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--
18	8062	35	16	282	129	54	4059	1883	53.6
19	5072	66	20	335	101	70	4394	1984	54.8
20	3104	43	33	133	102	23	4527	2086	53.9
21	4618	41	35	189	162	15	4716	2248	52.3
22	16313	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--
24	1681	196	15	329	25	92	5045	2273	54.9
25	5942	116	51	689	303	56	5734	2576	55.1
26	22899	27	7	618	160	74	6352	2736	56.9
27	1173	70	38	82	45	46	6434	2781	56.8
28	5413	106	11	574	60	90	7008	2841	59.5
29	6321	106	20	670	126	81	7678	2967	61.4

Table G2 (Cont.). MASS REMOVAL OF BOD - SITE II

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
30	3066	171	17	524	52	90	8202	3019	63.2
31	17865	95	30	1697	536	68	9899	3555	64.1
32	27290	62	39	1692	1064	37	11591	4619	60.1
33	11317	--	--	--	--	--	--	--	--
34	5337	58	45	310	240	22	11901	4859	59.2
35	11166	89	17	994	190	81	12895	5049	60.8
36	--	--	--	--	--	--	--	--	--
37	5905	41	25	242	148	39	13137	5197	60.4
38	13929	40	8	557	111	80	13694	5308	61.2
39	2044	58	10	119	20	83	13813	5328	61.4
40	--	--	--	--	--	--	--	--	--
41	9841	510	28	5019	276	94	18832	5604	70.2
42	2536	60	38	152	96	37	18984	5700	70.0
43	1703	161	43	274	73	73	19258	5773	70.0
44	--	--	--	--	--	--	--	--	--
45	6170	49	32	302	197	35	19560	5970	69.5
						60.4			69.5

Table G3. MASS REMOVAL OF TOC - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	2180	46	30	100	65	35	100	65	35.0
2	9500	19	20	180	190	- 5	280	255	8.9
3	3785	55	45	208	170	18	488	425	12.9
4	4920	37	33	182	162	11	670	587	12.4
5	2952	52	18	154	53	65	824	640	22.3
6	11961	68	37	813	443	46	1637	1083	33.8
7	6397	97	30	621	192	69	2258	1275	43.5
8	2271	79	53	179	120	33	2437	1395	42.8
9	12453	66	29	822	361	56	3259	1756	46.1
10	3482	120	96	418	334	20	3677	2090	43.2
11	6132	79	40	484	245	49	4161	2335	43.9
12	12907	107	24	1381	310	61	5542	2645	52.3
13	2347	780	37	1831	87	95	7373	2732	62.9
14	7684	70	37	538	284	47	7911	3016	61.9
15	643	80	43	51	28	46	7962	3044	61.8
16	7078	66	31	467	219	53	8429	3263	61.3
17	16540	103	22	1704	364	79	10133	3627	64.2
18	2498	96	52	240	130	46	10373	3757	63.8
19	3142	62	52	195	163	16	10568	3920	62.9
20	7116	51	42	363	299	18	10931	4219	61.4
21	7843	58	28	455	220	52	11386	4439	61.0
22	43944	52	33	2285	1450	37	13671	5889	56.9
23	4769	93	43	444	205	54	14115	6094	56.8
24	7684	171	20	1314	154	88	15429	6248	59.5
25	3899	89	42	347	164	53	15776	6412	59.4
26	32135	132	23	4242	739	83	20018	7151	64.3
27	946	63	60	60	57	5	20078	7208	64.1
28	2612	86	34	225	89	61	20303	7297	64.1
29	3369	79	41	266	138	48	20569	7435	63.9

Table G3 (Cont.). MASS REMOVAL OF TOC - SITE I

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
30	2536	103	72	261	183	30	20830	7618	63.4
31	24565	40	40	983	983	0	21813	8601	60.6
32	21574	84	33	1812	712	61	23625	9313	60.6
33	15973	--	--	--	--	--	--	--	--
34	3217	128	24	412	77	81	24037	9390	60.9
35	36639	40	36	1466	1319	10	25503	10709	58.0
36	1892	50	16	95	30	68	25598	10739	57.7
37	7684	109	19	838	146	83	26436	10885	58.8
38	15254	91	24	1388	366	74	27824	11251	59.6
39	1665	60	47	100	78	22	27924	11329	60.3
40	7229	232	60	1677	434	74	27601	11763	60.3
41	5223	56	24	292	125	57	29893	11888	60.2
42	1892	195	59	369	112	70	30262	12000	60.3
43	908	51	38	46	35	25	30308	12035	60.3
44	643	81	46	52	30	43	30360	12065	60.3
45	4958	63	40	312	198	36	30672	12263	60.0
						47.1			60.0

Table G4. MASS REMOVAL OF TOC - SITE II

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	--	--	--	--	--	--	--	--	--
2	12226	21	15	257	183	43	257	183	28.8
3	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--
5	3823	33	10	126	38	69	383	221	42.3
6	43376	18	12	781	521	33	1164	742	36.3
7	--	--	--	--	--	--	--	--	--
8	984	63	42	62	41	33	1226	783	36.1
9	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
12	17108	71	28	1215	479	61	2441	1262	48.3
13	3217	33	21	106	68	36	2547	1330	47.8
14	25549	54	44	1380	1124	19	3927	2454	37.5
15	1249	32	17	40	21	47	3967	2475	37.6
16	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--
18	8062	54	17	435	137	69	4402	2612	40.7
19	5072	38	22	193	112	42	4595	2724	40.7
20	3104	39	35	121	109	10	4716	2833	39.9
21	4618	37	30	171	139	19	4887	2972	39.2
22	16313	29	21	473	343	28	5360	3315	38.2
23	--	--	--	--	--	--	--	--	--
24	1681	316	29	531	49	91	5891	3364	42.9
25	5942	78	51	463	303	35	6354	3667	42.3
26	22899	50	20	1145	458	60	7499	4125	45.0
27	1173	58	40	68	47	31	7567	4172	44.9
28	5413	36	11	195	60	69	7762	4232	45.5
29	6321	140	20	885	126	86	8647	4358	49.6

Table G4 (Cont.). MASS REMOVAL OF TOC - SITE II

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
30	3066	152	32	466	98	79	9113	4456	51.1
31	17865	66	24	1179	429	64	10292	4885	52.5
32	27290	40	32	1092	873	20	11384	5758	49.4
33	11317	--	--	--	--	--	--	--	--
34	5337	230	24	1228	128	90	12612	5886	53.3
35	11166	168	18	1876	201	89	14488	6087	58.0
36	--	--	--	--	--	--	--	--	--
37	5905	46	27	272	159	41	14760	6246	57.7
38	13929	55	7	766	98	87	15526	6344	59.1
39	2044	83	22	170	45	74	15696	6389	59.3
40	--	--	--	--	--	--	--	--	--
41	9841	459	27	4517	266	94	20213	6655	67.1
42	2536	76	35	193	89	54	20406	6744	67.0
43	1703	86	36	146	61	58	20552	6805	66.9
44	--	--	--	--	--	--	--	--	--
45	6170	45	26	278	160	42	20830	6965	66.6
						54.0			66.6

Table G5. MASS REMOVAL OF TOTAL SOLIDS - SITE I

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	2180	518	502	1129	1094	3	1129	1094	3.1
2	9500	521	444	4950	4218	15	6079	5312	12.6
3	3785	554	534	2097	2021	4	8176	7333	10.3
4	4920	--	--	--	--	--	--	--	--
5	2952	439	286	1296	844	35	9472	8177	13.7
6	11961	561	416	6710	4976	26	16182	13153	18.7
7	6397	632	343	4043	2194	46	20225	15347	24.1
8	2271	575	504	1306	1145	12	21531	16492	23.4
9	12453	552	485	6874	6040	12	28405	22532	20.7
10	3482	992	725	3454	2524	27	31859	25056	21.4
11	6132	489	407	2999	2496	17	34858	27552	21.0
12	12907	508	380	6557	4905	25	41415	32457	21.6
13	2347	1642	428	3854	1005	74	45269	33462	26.1
14	7684	484	394	3719	3027	19	48988	36489	25.5
15	643	505	375	325	241	26	49313	36730	25.5
16	7078	433	293	3065	2074	32	52378	38804	25.9
17	16540	800	312	13232	5160	61	65610	43964	33.0
18	2498	745	317	1861	792	57	67471	44756	33.7
19	3142	539	519	1694	1631	4	69165	46387	32.9
20	7116	364	343	2590	2441	6	71755	48828	32.0
21	7843	417	316	3271	2478	24	75026	51306	31.6
22	43944	424	352	18632	15468	17	93658	66774	28.7
23	4769	515	375	2456	1788	27	96114	68562	28.7
24	7684	843	398	6478	3058	53	102592	71620	30.2
25	3899	580	559	2261	2180	4	104853	73800	29.6
26	32135	758	354	24358	11376	53	129211	85176	34.1
27	946	556	576	526	545	-4	129737	85721	33.9
28	2612	597	466	1559	1217	22	131296	86938	33.8

Table G5 (Cont.). MASS REMOVAL OF TOTAL SOLIDS - SITE I

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
29	3369	651	485	2193	1634	25	133489	88572	33.6
30	2536	617	480	1565	1217	22	135054	89789	33.5
31	24565	488	469	11988	11521	4	147042	101310	31.1
32	21574	641	579	13829	12491	10	160871	113801	29.3
33	15973	--	--	--	--	--	--	--	--
34	3217	854	488	2747	1570	43	163618	115371	29.5
35	36639	488	477	17880	17477	2	181498	132848	26.8
36	1892	555	464	1050	878	16	182548	133726	26.7
37	7684	795	574	6109	4411	28	188657	138137	26.8
38	15254	622	462	9488	7047	26	198145	145184	26.7
39	1665	542	522	902	869	4	199047	146053	26.6
40	7229	1066	475	7706	3434	55	206753	149487	27.7
41	5223	733	368	3828	1922	50	210581	151409	28.1
42	1892	826	473	1563	895	43	212144	152304	28.2
43	908	551	389	500	353	29	212644	152657	28.2
44	643	558	381	359	245	32	213003	152902	28.2
45	4958	731	579	3624	2871	21	216627	155773	28.1
						25.7			28.1

Table G6. MASS REMOVAL OF TOTAL SOLIDS - SITE II

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	--	--	--	--	--	--	--	--	--
2	12226	474	345	5795	4218	27	5795	4218	27.2
3	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--
5	3823	--	--	--	--	--	--	--	--
6	43376	566	371	24551	16092	34	30346	20310	33.1
7	--	--	--	--	--	--	--	--	--
8	984	524	378	516	372	28	30862	20682	34.2
9	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
12	17108	737	264	12609	4517	64	43471	25199	42.0
13	3217	518	434	1666	1396	16	45137	26595	41.1
14	25549	576	431	14716	11012	25	59853	37607	37.2
15	1249	484	421	605	526	13	60458	38133	36.9
16	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--
18	8062	515	299	4152	2411	42	64610	40544	37.2
19	5072	723	368	3667	1866	49	68277	42410	37.9
20	3104	462	358	1434	1111	23	69711	43521	37.6
21	4618	442	314	2041	1450	29	71752	44971	37.3
22	--	--	--	--	--	--	--	--	--
23	--	--	--	--	--	--	--	--	--
24	1681	1371	434	2305	730	68	74057	45701	38.3
25	5942	586	576	3482	3423	2	77539	49124	36.6
26	22899	747	379	17106	8679	49	94645	57803	38.9
27	1173	581	384	682	450	34	95327	58253	38.9
28	5413	743	363	4022	1965	51	99349	60218	39.4

Table G6 (Cont.). MASS REMOVAL OF TOTAL SOLIDS - SITE II

Run	Plant vol, cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
29	6321	1272	398	8040	2516	69	107389	62734	41.6
30	3066	1155	396	3541	1214	66	110930	63948	42.4
31	17865	538	384	9611	6860	29	120541	70808	41.3
32	27290	462	573	12608	15637	-24	133149	86445	35.1
33	11317	--	--	--	--	--	--	--	--
34	5337	2297	476	12259	2540	79	145408	88985	38.8
35	11166	2558	421	28563	4701	84	173971	93686	46.1
36	--	--	--	--	--	--	--	--	--
37	5905	768	577	4535	3407	25	178506	97093	45.6
38	13929	484	363	6742	5056	25	185248	102149	44.9
39	2044	507	556	1036	1136	-10	186284	103285	44.6
40	--	--	--	--	--	--	--	--	--
41	9841	1868	405	18383	3986	78	204667	107271	47.6
42	2536	769	441	1950	1118	43	206617	108389	47.5
43	1703	1098	456	1870	777	58	208487	109166	47.6
44	--	--	--	--	--	--	--	--	--
45	6170	472	409	2912	2524	13	211399	111690	47.2
						37.6			47.2

Table G7. MASS REMOVAL OF SUSPENDED SOLIDS - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	2180	101	46	220	100	54	220	100	54.5
2	9500	130	62	1235	589	52	1455	689	52.6
3	3785	112	72	424	273	36	1879	962	48.8
4	4920	58	45	285	221	22	2164	1183	45.3
5	2952	208	59	614	174	72	2778	1357	51.2
6	11961	314	136	3756	1627	57	6534	2984	54.3
7	6397	378	52	2418	333	86	8952	3317	62.9
8	2271	159	38	361	86	76	9313	3403	63.5
9	12453	126	6	1569	75	95	10882	3478	68.0
10	3482	624	353	2173	1229	43	13055	4707	63.9
11	6132	309	157	1895	963	49	14950	5670	62.1
12	12907	270	58	3485	749	78	18435	6419	65.2
13	2347	1326	270	3112	634	80	21547	7053	67.3
14	7684	274	76	2105	584	72	23652	7637	67.7
15	643	251	132	161	85	47	23813	7722	67.6
16	7078	145	42	1026	297	71	24839	8019	67.7
17	16540	663	52	10966	860	92	35805	8879	75.2
18	2498	602	103	1504	257	83	37309	9136	75.5
19	3142	168	154	528	484	8	37837	9620	74.6
20	7116	150	112	1067	797	25	38904	10417	73.2
21	7843	179	127	1404	996	29	40308	11413	71.7
22	43944	155	109	6811	4790	30	47119	16203	65.6
23	4769	213	62	1016	296	71	48135	16499	65.7
24	7684	519	69	3988	530	87	52123	17029	67.3
25	3899	123	72	480	281	42	52603	17310	67.1
26	32135	334	53	10733	1703	84	63336	19013	70.0
27	946	151	93	143	88	38	63479	19101	69.9
28	2612	183	50	478	131	73	63957	19232	69.9

Table G7 (continued). MASS REMOVAL OF SUSPENDED SOLIDS - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
29	3369	295	97	994	327	67	64951	19559	69.9
30	2536	301	183	763	464	39	65714	20023	69.5
31	24565	155	82	3808	2014	47	69522	22037	68.3
32	21574	224	72	4832	1553	68	74354	23590	68.3
33	15973	--	--	--	--	--	--	--	--
34	3217	577	113	1856	364	80	76210	23954	68.6
35	36639	197	113	7218	4140	43	83428	28094	66.3
36	1892	159	56	301	106	65	83729	28200	66.3
37	7684	437	79	3358	607	82	87087	28807	66.9
38	15254	230	37	3508	564	84	90595	29371	67.6
39	1665	94	79	157	132	16	90752	29503	67.5
40	7229	559	136	4041	983	76	94793	30486	67.8
41	5223	129	37	674	193	71	95467	30679	67.9
42	1892	344	173	651	327	50	96118	31006	67.7
43	908	220	83	200	75	62	96318	31081	67.7
44	643	200	69	129	44	65	96447	31125	67.7
45	4958	218	89	1081	441	59	97528	31566	67.6
						59.7			67.6

Table G8. MASS REMOVAL OF SUSPENDED SOLIDS - SITE II

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	--	--	--	--	--	--	--	--	--
2	12226	124	101	1516	1235	19	1516	1235	18.5
3	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--
5	3823	382	90	1460	344	90	2976	1579	46.9
6	43376	160	54	6940	2342	66	9916	3921	60.5
7	--	--	--	--	--	--	--	--	--
8	984	152	66	150	65	57	10066	3986	60.4
9	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
12	17108	509	110	8708	1882	78	18774	5868	68.7
13	3217	391	175	1258	563	55	20032	6431	67.9
14	25549	315	242	8048	6183	23	28080	12614	55.1
15	1249	209	46	261	57	78	28341	12671	55.3
16	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--
18	8062	344	111	2773	895	68	31114	13566	56.4
19	5072	498	59	2526	299	88	33640	13865	58.8
20	3104	296	152	919	472	49	34559	14337	58.5
21	4618	290	187	1339	864	36	35898	15201	57.7
22	16313	250	197	4078	3214	21	39976	18415	53.9
23	--	--	--	--	--	--	--	--	--
24	1681	1160	164	1950	276	86	41926	18691	55.4
25	5942	239	111	1420	660	54	43346	19351	55.4
26	22899	508	170	11633	3893	67	54979	23244	57.7
27	1173	206	87	242	102	58	55221	23346	57.7
28	5413	522	22	2826	119	96	58047	23465	59.6
29	6321	1084	77	6852	487	93	64899	23952	63.1

Table G8 (Cont.). MASS REMOVAL OF SUSPENDED SOLIDS - SITE 11

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
30	3066	729	65	2235	199	91	67134	24151	64.0
31	17865	314	133	5610	2376	58	72744	26527	63.5
32	27290	176	208	4803	5676	-18	77547	32203	58.5
33	11317	--	--	--	--	--	--	--	--
34	5337	2070	200	11048	1067	90	88595	33270	62.4
35	11166	1766	189	19719	2110	89	108314	35380	67.3
36	--	--	--	--	--	--	--	--	--
37	5905	355	149	2096	880	58	110410	36260	67.2
38	13929	173	38	2410	529	78	112820	36789	67.4
39	2044	380	66	777	135	83	113597	36924	67.5
40	--	--	--	--	--	--	--	--	--
41	9841	928	46	9132	453	95	122729	37377	69.4
42	2536	269	63	682	160	77	123411	37537	69.6
43	1703	571	50	972	85	91	124383	37622	69.8
44	--	--	--	--	--	--	--	--	--
45	6170	293	76	1808	469	74	126191	38091	69.8
						66.1			69.8

Table G9. MASS REMOVAL OF VOLATILE SUSPENDED SOLIDS - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	2180	44	14	96	31	68	96	31	67.7
2	9500	17	13	162	124	24	258	155	39.9
3	3785	70	33	265	125	53	523	280	46.5
4	4920	45	29	221	143	36	744	423	43.1
5	2952	78	17	230	50	78	974	473	51.4
6	11961	145	64	1734	766	56	2708	1239	54.2
7	6397	155	17	992	109	89	3700	1348	63.6
8	2271	47	6	107	14	87	3807	1362	64.2
9	12453	14	0	174	0	100	3981	1362	65.8
10	3482	234	168	815	585	28	4796	1947	59.4
11	6132	149	59	914	362	60	5710	2309	59.6
12	12907	120	18	1549	232	85	7259	2541	65.0
13	2347	976	61	2291	143	94	9550	2684	71.9
14	7684	139	34	1068	261	76	10618	2945	72.3
15	643	148	66	95	42	55	10713	2987	72.1
16	7078	45	3	319	21	93	11032	3008	72.7
17	16540	388	31	6418	513	92	17450	3521	79.8
18	2498	276	41	689	102	85	18139	3623	80.0
19	3142	112	90	352	283	20	18491	3906	78.9
20	7116	89	54	633	384	39	19124	4290	77.6
21	7843	109	75	855	588	31	19979	4878	75.6
22	43944	51	36	2241	1582	29	22220	6460	70.9
23	4769	90	18	429	86	80	22649	6546	71.1
24	7684	277	46	2128	353	83	24777	6899	72.2
25	3899	53	28	207	109	47	24984	7008	72.0
26	32135	160	16	5142	514	90	30126	7522	75.0
27	946	78	40	74	38	49	30200	7560	75.0
28	2612	91	20	238	52	78	30438	7612	75.0
29	3369	145	42	489	141	71	30927	7753	74.9

Table G9 (Cont.). MASS REMOVAL OF VOLATILE SUSPENDED SOLIDS - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
30	2536	144	59	365	150	59	31292	7903	74.7
31	24565	77	34	1892	835	56	33184	8738	73.7
32	21574	96	21	2071	453	78	35255	9191	73.9
33	15973	--	--	--	--	--	--	--	--
34	3217	372	40	1197	129	89	36452	9320	74.4
35	36639	94	40	3444	1466	57	39896	10786	73.0
36	1892	79	24	149	45	70	40045	10831	73.0
37	7684	236	24	1813	184	90	41858	11015	73.7
38	15254	89	15	1358	229	83	43216	11244	74.0
39	1665	41	32	68	53	22	43284	11297	73.9
40	7229	250	46	1807	333	82	45091	11630	74.2
41	5223	49	16	256	84	67	45347	11714	74.2
42	1892	165	111	312	210	33	45659	11924	73.9
43	908	79	28	72	25	65	45731	11949	73.9
44	643	137	54	88	35	61	45819	11984	73.8
45	4958	155	64	768	317	59	46587	12301	73.6
						64.7			73.6

Table G10. MASS REMOVAL OF VOLATILE SUSPENDED SOLIDS - SITE II

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	--	--	--	--	--	--	--	--	--
2	12226	21	24	257	293	-14	257	293	-14.0
3	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--
5	3823	76	13	291	50	83	548	343	37.4
6	43376	9	16	390	694	-78	938	1037	-10.6
7	--	--	--	--	--	--	--	--	--
8	984	24	5	24	5	79	962	1042	- 8.3
9	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
12	17108	90	14	1540	240	84	2502	1282	48.8
13	3217	97	50	312	161	48	2814	1443	48.7
14	25549	82	75	2095	1916	9	4909	3359	31.6
15	1249	69	7	86	9	90	4995	3368	32.6
16	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--
18	8062	45	40	363	322	11	5358	3690	31.1
19	5072	139	20	705	101	86	6063	3791	37.5
20	3104	61	26	189	81	57	6252	3872	38.1
21	4618	69	65	319	300	6	6571	4172	36.5
22	16313	41	29	669	473	29	7240	4645	35.8
23	--	--	--	--	--	--	--	--	--
24	1681	475	69	798	116	85	8038	4761	40.8
25	5942	48	28	285	166	42	8323	4927	40.8
26	22899	86	26	1969	595	70	10292	5522	46.3
27	1173	61	21	72	25	66	10364	5547	46.5
28	5413	136	14	736	76	90	11100	5623	49.3

Table G10 (Cont.). MASS REMOVAL OF VOLATILE SUSPENDED SOLIDS - SITE II

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
29	6321	300	20	1896	126	93	12996	5749	55.8
30	3066	217	16	665	49	93	13661	5798	57.6
31	17865	100	37	1786	661	63	15447	6459	58.2
32	27290	26	42	710	1146	-62	16157	7605	52.9
33	11317	--	--	--	--	--	--	--	--
34	5337	464	29	2476	155	94	18633	7760	58.4
35	11166	335	42	3741	469	87	22374	8229	63.2
36	--	--	--	--	--	--	--	--	--
37	5905	147	41	868	242	72	23242	8471	63.6
38	13929	40	6	557	84	85	23799	8555	64.1
39	2044	94	14	192	29	85	23991	8584	64.2
40	--	--	--	--	--	--	--	--	--
41	9841	287	19	2824	187	93	26815	8771	67.3
42	2536	127	33	322	84	74	27137	8855	67.4
43	1703	140	10	238	17	93	27375	8872	67.6
44	--	--	--	--	--	--	--	--	--
45	6170	113	52	697	321	54	28072	9193	67.3
						57.0			67.3

Table G11. MASS REMOVALS OF TOTAL PHOSPHORUS - SITE 1

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	2180	2.30	1.00	5.0	2.2	57	5.0	2.2	56.0
2	9500	0.62	0.40	5.9	3.8	32	10.9	6.0	45.0
3	3785	3.11	2.96	11.8	11.2	5	22.7	17.2	24.2
4	4920	--	--	--	--	--	--	--	--
5	2952	1.80	0.65	5.3	1.9	64	28.0	19.1	31.8
6	11961	3.33	1.99	39.8	23.8	40	67.8	42.9	36.7
7	6397	3.80	1.32	24.3	8.4	65	92.1	51.3	44.3
8	2271	4.19	2.04	9.5	4.6	51	101.6	55.9	45.0
9	12453	2.59	1.03	32.3	12.8	60	133.9	68.7	48.7
10	3482	5.37	2.38	18.7	8.3	56	152.6	77.0	49.5
11	6132	1.82	3.51	11.2	21.5	-93	163.8	98.5	39.9
12	12907	2.98	1.04	38.5	13.4	65	202.3	111.9	44.7
13	2347	7.70	2.17	18.1	5.1	72	220.4	117.0	46.9
14	7684	2.65	2.40	20.4	18.4	9	240.8	135.4	43.8
15	643	4.36	3.32	2.8	2.1	24	243.6	137.5	43.6
16	7078	2.80	1.34	19.8	9.5	52	263.4	147.0	44.2
17	16540	4.18	0.82	69.1	13.6	80	332.5	160.6	51.7
18	2498	4.43	1.73	11.1	4.3	61	343.6	164.9	52.0
19	3142	4.40	3.62	13.8	11.4	18	357.4	176.3	50.7
20	7116	3.82	1.12	27.2	8.0	71	384.6	184.3	52.1
21	7843	5.43	1.03	42.6	8.1	81	427.2	192.4	55.0
22	43944	2.70	1.42	118.6	62.4	47	545.8	254.8	53.3
23	4769	3.10	0.93	14.8	4.4	70	560.6	259.2	53.8
24	7684	3.53	0.82	27.1	6.3	77	587.7	265.5	54.8
25	3899	2.49	1.44	9.7	5.6	42	597.4	271.1	54.6
26	32135	3.79	0.83	121.8	26.7	78	719.2	297.8	58.6
27	946	2.73	2.69	2.6	2.5	1	721.8	300.3	58.4
28	2612	2.72	2.07	7.1	5.4	24	728.9	305.7	58.1

Table G11 (Cont.). MASS REMOVALS OF TOTAL PHOSPHORUS - SITE I

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
29	3369	3.13	1.55	10.5	5.2	50	739.4	310.9	58.0
30	2536	5.12	3.59	13.0	9.1	30	752.4	320.0	57.5
31	24565	2.54	1.73	62.4	42.5	32	814.8	362.5	55.5
32	21574	2.97	1.23	64.1	26.5	59	878.9	389.0	55.7
33	15973	--	--	--	--	--	--	--	--
34	3217	4.86	1.75	15.6	5.6	64	894.5	394.6	55.9
35	36639	2.31	2.03	84.6	74.4	12	979.1	469.0	52.1
36	1892	2.51	0.66	4.7	1.2	74	983.8	470.2	52.2
37	7684	4.01	1.34	30.8	10.3	67	1014.6	480.5	52.6
38	15254	1.86	0.46	28.4	7.0	75	1043.0	487.5	53.3
39	1665	2.58	1.80	4.3	3.0	30	1047.3	490.5	53.2
40	7229	3.75	1.87	27.1	13.5	50	1074.4	504.0	53.1
41	5223	2.55	0.87	13.3	4.5	66	1087.7	508.5	53.2
42	1892	4.15	1.96	7.9	3.7	53	1095.6	512.2	53.2
43	908	3.35	1.85	3.0	1.7	45	1098.6	513.9	53.2
44	643	2.07	1.30	1.3	0.8	37	1099.9	514.7	53.2
45	4958	2.82	1.44	14.0	7.1	49	1113.9	521.8	53.2
						46.6			53.2

Table G12. MASS REMOVALS OF TOTAL PHOSPHORUS - SITE 11

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
1	--	--	--	--	--	--	--	--	--
2	12226	0.63	0.15	7.7	1.8	76	7.7	1.8	76.6
3	--	--	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--	--	--
5	3823	0.93	0.20	3.6	0.8	78	11.3	2.6	77.0
6	43376	0.70	0.27	30.4	11.7	61	41.7	14.3	65.7
7	--	--	--	--	--	--	--	--	--
8	984	2.31	1.39	2.3	1.4	40	44.0	15.7	64.3
9	--	--	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
12	17108	2.13	0.66	36.4	11.3	69	80.4	27.0	66.4
13	3217	1.66	0.84	5.3	2.7	49	85.7	29.7	65.3
14	25549	1.57	1.06	40.1	27.1	32	125.8	56.8	54.8
15	1249	2.12	0.76	2.6	0.9	64	128.4	57.7	55.1
16	--	--	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--	--	--
18	8062	1.91	0.51	15.4	4.1	73	143.8	61.8	57.0
19	5072	1.98	0.37	10.0	1.9	81	153.8	63.7	58.6
20	3104	1.70	1.88	5.3	5.8	-11	159.1	69.5	56.3
21	4618	0.64	0.75	3.0	3.5	-17	162.1	73.0	55.0
22	16313	0.86	0.74	14.0	12.1	14	176.1	85.1	51.7
23	--	--	--	--	--	--	--	--	--
24	1681	4.90	0.42	8.2	0.7	91	184.3	85.8	53.4
25	5942	1.47	0.56	8.7	3.3	62	193.0	89.1	53.8
26	22899	1.00	0.56	22.9	12.8	44	215.9	101.9	52.8
27	1173	2.21	0.74	2.6	0.9	67	218.5	102.8	53.0
28	5413	2.99	0.21	16.2	1.1	93	234.7	103.9	55.7

Table G12. MASS REMOVALS OF TOTAL PHOSPHORUS - SITE II

Run	Plant vol. cu m	mg/l in	mg/l out	kg in	kg out	Percent removal	Total kg in	Total kg out	Cumulative percent removal
29	6321	4.14	0.93	26.2	5.9	78	260.9	109.8	57.9
30	3066	4.92	0.43	15.1	1.3	91	276.0	111.1	59.7
31	17865	1.66	0.78	30.0	13.9	53	306.0	125.0	59.2
32	27290	1.07	1.07	29.2	29.2	0	335.2	154.2	54.0
33	11317	--	--	--	--	--	--	--	--
34	5337	5.62	1.15	30.0	6.1	80	365.2	160.3	56.1
35	11166	3.54	0.86	39.5	9.6	76	404.7	169.9	58.0
36	--	--	--	--	--	--	--	--	--
37	5905	1.85	0.69	10.9	4.1	63	415.6	174.0	58.1
38	13929	1.49	0.28	20.8	3.9	81	436.4	177.9	59.2
39	2044	1.65	0.57	3.4	1.2	65	439.8	179.1	59.3
40	--	--	--	--	--	--	--	--	--
41	9841	4.06	0.38	40.0	3.7	91	479.8	182.8	61.9
42	2536	2.57	0.29	6.5	0.7	89	486.3	183.5	62.3
43	1703	3.51	0.72	6.0	1.2	79	492.3	184.7	62.5
44	--	--	--	--	--	--	--	--	--
45	6170	1.48	0.63	9.1	3.9	57	501.4	188.6	62.4
						60.3			62.4

APPENDIX IV-H

TOTAL POLLUTIONAL MASS REMOVALS FROM COMBINED SEWER OVERFLOW VOLUMES

Table H1. TOTAL MASS REMOVAL OF BOD FROM COMBINED SEWER OVERFLOW VOLUMES - SITE I

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	7684	5660	13344	97	25	192	549	1294	741	42.7
25	3899	2073	5972	52	33	129	108	311	237	23.8
26	32135	22634	54769	96	16	514	2173	5258	2687	48.9
27	946	0	946	74	60	57	0	70	57	18.6
28	2612	762	3374	96	39	102	73	324	175	46.0
29	3369	16105	19474	79	36	121	1272	1538	1393	9.4
30	2536	667	3203	111	65	165	74	356	239	32.9
31	24565	0	24565	65	32	786	0	1597	786	50.8
32	21574	366	21940	99	12	259	36	2172	295	86.4
33	15973	21832	37805	--	--	--	--	--	--	--
34	3217	1407	4624	150	62	199	211	694	410	40.9
35	36639	7042	43681	59	22	806	415	2577	1221	52.6
36	1892	0	1892	62	25	47	0	117	47	59.8
37	7684	2080	9764	138	38	292	287	1347	579	57.0
38	15254	33255	48509	55	13	198	1829	2668	2027	24.0
39	1665	2748	4413	58	36	60	159	256	219	14.5
40	7229	284	7513	115	42	304	33	864	337	61.0
41	5223	0	5223	43	18	94	0	225	94	58.2
42	1892	0	1892	256	59	112	0	484	112	76.9
43	908	0	908	101	66	60	0	92	60	34.8
44	643	0	643	88	58	37	0	57	37	35.1
45	4958	0	4958	87	41	203	0	431	203	52.9
Total								22,732	11,956	47.4

Table H2. TOTAL MASS REMOVAL OF BOD FROM COMBINED SEWER OVERFLOW VOLUMES - SITE II

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	1681	96896	98577	196	15	25	18992	19321	19017	1.6
25	5942	0	5942	116	51	303	0	689	303	56.0
26	22899	26116	49015	27	7	160	705	1323	865	34.6
27	1173	0	1173	70	38	45	0	82	45	45.1
28	5413	1136	6549	106	11	60	120	694	180	74.1
29	6321	21593	27914	106	20	126	2289	2959	2415	18.4
30	3066	0	3066	171	17	52	0	524	52	90.1
31	17865	1892	19757	95	30	536	180	1877	716	61.9
32	27290	11734	39024	62	39	1064	728	2419	1792	25.9
33	--	--	--	--	--	--	--	--	--	--
34	5337	0	5337	58	45	240	0	310	240	22.6
35	11166	137774	148940	89	17	190	12262	13256	12452	6.1
36	--	--	--	--	--	--	--	--	--	--
37	5905	0	5905	41	25	148	0	242	148	38.8
38	13929	131340	145269	40	8	111	5254	5811	5365	7.7
39	2044	0	2044	58	10	20	0	119	20	83.2
40	--	--	--	--	--	--	--	--	--	--
41	9841	0	9841	510	28	276	0	5019	276	94.5
42	2536	757	3293	60	38	96	45	198	141	28.8
43	1703	0	1703	161	43	73	0	274	73	73.4
44	--	--	--	--	--	--	--	--	--	--
45	6170	0	6170	49	32	197	0	302	197	34.8
Total								55,419	44,297	20.1

Table H3. TOTAL MASS REMOVAL OF TOC FROM COMBINED SEWER OVERFLOW VOLUMES - SITE I

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	7684	5660	13344	171	20	154	968	2282	1122	50.8
25	3899	2073	5972	89	42	164	184	532	348	34.6
26	32135	22634	54769	132	23	739	2988	7230	3727	48.5
27	946	0	946	63	60	57	0	60	57	5.0
28	2612	762	3374	86	34	89	66	290	155	46.6
29	3369	16105	19474	79	41	138	1272	1538	1410	8.3
30	2536	667	3203	103	72	183	69	330	252	23.6
31	24565	0	24565	40	40	983	0	983	983	0.0
32	21574	366	21940	84	33	712	31	1843	743	59.7
33	15973	21832	37805	--	--	--	--	--	--	--
34	3217	1407	4624	128	24	77	180	592	257	56.6
35	36639	7042	43681	40	36	1319	282	1747	1601	8.4
36	1892	0	1892	50	16	30	0	95	30	68.4
37	7684	2080	9764	109	19	146	227	1064	373	64.9
38	15254	33255	48509	91	24	366	3026	4414	3392	23.2
39	1665	2748	4413	60	47	78	165	265	243	8.3
40	7229	284	7513	232	60	434	66	1743	500	71.3
41	5223	0	5223	56	24	125	0	292	125	57.2
42	1892	0	1892	195	59	112	0	369	112	69.6
43	908	0	908	51	38	35	0	46	35	23.9
44	643	0	643	81	46	30	0	52	30	42.3
45	4958	0	4958	63	40	198	0	312	198	36.5
Total								26,079	15,693	39.8

Table H4. TOTAL MASS REMOVAL OF TOC FROM COMBINED SEWER OVERFLOW VOLUMES - SITE II

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	1681	96896	98577	316	29	49	30619	31150	30668	1.5
25	5942	0	5942	78	51	303	0	463	303	34.6
26	22899	26116	49015	50	20	458	1306	2451	1764	28.0
27	1173	0	1173	58	40	47	0	68	47	30.9
28	5413	1136	6549	36	11	60	41	236	101	57.2
29	6321	21593	27914	140	20	126	3023	3908	3149	19.4
30	3066	0	3066	152	32	98	0	466	98	79.0
31	17865	1892	19757	66	24	429	125	1304	554	57.5
32	27290	11734	39024	40	32	873	469	1561	1342	14.0
33	--	--	--	--	--	--	--	--	--	--
34	5337	0	5337	230	24	128	0	1228	128	89.6
35	11166	137774	148940	168	18	201	23146	25022	23347	6.7
36	--	--	--	--	--	--	--	--	--	--
37	5905	0	5905	46	27	159	0	272	159	41.5
38	13929	131340	145269	55	7	98	7224	7990	7322	8.4
39	2044	0	2044	83	22	45	0	170	45	73.5
40	--	--	--	--	--	--	--	--	--	--
41	9841	0	9841	459	27	266	0	4517	266	94.1
42	2536	757	3293	76	35	89	58	250	147	41.2
43	1703	0	1703	86	36	61	0	146	61	58.2
44	--	--	--	--	--	--	--	--	--	--
45	6170	0	6170	45	26	160	0	278	160	42.4
Total								81,480	69,661	14.5

Table H5. TOTAL MASS REMOVAL OF TOTAL SOLIDS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE I

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	7684	5660	13344	843	398	3058	4771	11249	7829	30.4
25	3899	2073	5972	580	559	2180	1202	3464	3382	2.4
26	32135	22634	54769	758	354	11376	13128	41515	24504	41.0
27	946	0	946	556	576	545	0	526	545	0.0
28	2612	762	3374	597	466	1217	455	2014	1672	17.0
29	3369	16105	19474	651	485	1634	10484	12678	12118	4.4
30	2536	667	3203	617	480	1217	412	1976	1629	17.6
31	24565	0	24565	488	469	11521	0	11988	11521	3.9
32	21574	366	21940	651	579	12491	235	14064	12726	9.5
33	15973	21832	37805	--	--	--	--	--	--	--
34	3217	1407	4624	854	488	1570	1202	3949	2772	29.8
35	36639	7042	43681	488	477	17477	3436	21316	20913	1.9
36	1892	0	1892	555	464	878	0	1050	878	16.4
37	7684	2080	9764	795	574	4411	1654	7762	6065	21.9
38	15254	33255	48509	622	462	7047	20685	30173	27732	8.1
39	1665	2748	4413	542	522	869	1489	2392	2358	1.4
40	7229	284	7513	1066	475	3434	303	8009	3737	53.3
41	5223	0	5223	733	368	1922	0	3828	1922	49.8
42	1892	0	1892	826	473	895	0	1563	895	42.7
43	908	0	908	551	389	353	0	500	353	29.4
44	643	0	643	558	381	245	0	359	245	31.8
45	4958	0	4958	731	579	2871	0	3624	2871	20.8
Total								183,999	146,667	20.3

Table H6. TOTAL MASS REMOVAL OF TOTAL SOLIDS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE II

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	1681	96896	98577	1371	434	730	132844	135149	133574	1.2
25	5942	0	5942	586	576	3423	0	3482	3423	1.7
26	22899	26116	49015	747	379	8679	19509	36614	28188	23.0
27	1173	0	1173	581	384	450	0	682	450	34.0
28	5413	1136	6549	743	363	1965	844	4866	2809	42.3
29	6321	21593	27914	1272	398	2516	27466	35507	29982	15.6
30	3066	0	3066	1155	396	1214	0	3541	1214	65.7
31	17865	1892	19757	538	384	6860	1018	10629	7878	25.9
32	27290	11734	39024	462	573	15637	5421	18029	21058	0.0
33	--	--	--	--	--	--	--	--	--	--
34	5337	0	5337	2297	476	2540	0	12259	2540	79.3
35	11166	137774	148940	2558	421	4701	352425	380988	357126	6.3
36	--	--	--	--	--	--	--	--	--	--
37	5905	0	5905	768	577	3407	0	4535	3407	24.9
38	13929	131340	145269	484	363	5056	63569	70310	68625	2.4
39	2044	0	2044	507	556	1136	0	1036	1136	0.0
40	--	--	--	--	--	--	--	--	--	--
41	9841	0	9841	1868	405	3986	0	18383	3986	78.3
42	2536	757	3293	769	441	1118	582	2532	1700	32.9
43	1703	0	1703	1098	456	777	0	1870	777	58.4
44	--	--	--	--	--	--	--	--	--	--
45	6170	0	6170	472	409	2524	0	2912	2524	13.3
Total								743,324	670,397	9.8

Table H7. TOTAL MASS REMOVAL OF SUSPENDED SOLIDS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE I

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	7684	5660	13344	519	69	530	2938	6926	3468	49.9
25	3899	2073	5972	123	72	281	255	735	536	27.1
26	32135	22634	54769	334	53	1703	7560	18293	9263	49.4
27	946	0	946	151	93	88	0	143	88	38.5
28	2612	762	3374	183	50	131	139	617	270	56.2
29	3369	16105	19474	295	97	327	4751	5745	5078	11.6
30	2536	667	3203	301	183	464	201	964	665	31.0
31	24565	0	24565	155	82	2014	0	3808	2014	47.1
32	21574	366	21940	224	72	1553	82	4915	1635	66.7
33	15973	21832	37805	--	--	--	--	--	--	--
34	3217	1407	4624	577	113	364	812	2668	1176	55.9
35	36639	7042	43681	197	113	4140	1387	8605	5527	35.8
36	1892	0	1892	159	56	106	0	301	106	64.8
37	7684	2080	9764	437	79	607	909	4267	1516	64.5
38	15254	33255	48509	230	37	564	7649	11157	8213	26.4
39	1665	2748	4413	94	79	132	258	415	390	6.0
40	7229	284	7513	559	136	983	159	4200	1142	72.8
41	5223	0	5223	129	37	193	0	674	193	71.4
42	1892	0	1892	344	173	327	0	651	327	49.8
43	908	0	908	220	83	75	0	200	75	62.5
44	643	0	643	200	69	44	0	129	44	65.9
45	4958	0	4958	218	89	441	0	1081	441	59.2
Total								76,494	42,167	44.9

Table H8. TOTAL MASS REMOVAL OF SUSPENDED SOLIDS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE II

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	1681	96896	98577	1160	164	276	112399	114349	112675	1.5
25	5942	0	5942	239	111	660	0	1420	660	53.5
26	22899	26116	49015	508	170	3893	13267	24900	17160	31.1
27	1173	0	1173	206	87	102	0	242	102	57.9
28	5413	1136	6549	522	22	119	593	3419	712	79.2
29	6321	21593	27914	1084	77	487	23407	30259	23894	21.0
30	3066	0	3066	729	65	199	0	2235	199	91.1
31	17865	1892	19757	314	133	2376	594	6204	2970	52.1
32	27290	11734	39024	176	208	5676	2065	6868	7741	0.0
33	--	--	--	--	--	--	--	--	--	--
34	5337	0	5337	2070	200	1067	0	11048	1067	90.3
35	11166	137774	148940	1766	189	2110	243309	263028	245419	6.7
36	--	--	--	--	--	--	--	--	--	--
37	5905	0	5905	355	149	880	0	2096	880	58.0
38	13929	131340	145269	173	38	529	22722	25132	23251	7.5
39	2044	0	2044	380	66	135	0	777	135	82.6
40	--	--	--	--	--	--	--	--	--	--
41	9841	0	9841	928	46	453	0	9132	453	95.0
42	2536	757	3293	269	63	160	204	886	364	58.9
43	1703	0	1703	571	50	85	0	972	85	91.3
44	--	--	--	--	--	--	--	--	--	--
45	6170	0	6170	293	76	469	0	1808	469	74.1
Total								504,775	438,236	13.2

Table H9. TOTAL MAS REMOVAL OF VOLATILE SUSPENDED SOLIDS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE I

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	7684	5660	13344	277	46	353	1568	3696	1921	48.0
25	3899	2073	5972	53	28	109	110	317	219	30.9
26	32135	22634	54769	160	16	514	3621	8763	4135	52.8
27	946	0	946	78	40	38	0	74	38	48.6
28	2612	762	3374	91	20	52	69	307	121	60.6
29	3369	16105	19474	145	42	141	2335	2824	2476	12.3
30	2536	667	3203	144	59	150	96	461	246	46.6
31	24565	0	24565	77	34	835	0	1892	835	55.9
32	21574	366	21940	96	21	453	35	2106	488	76.8
33	15973	21832	37805	--	--	--	--	--	--	--
34	3217	1407	4624	372	40	129	523	1720	652	62.1
35	36639	7042	43681	94	40	1466	662	4106	2128	48.2
36	1892	0	1892	79	24	45	0	149	45	69.8
37	7684	2080	9764	236	24	184	491	2304	675	70.7
38	15254	33255	48509	89	15	229	2960	4317	3189	26.1
39	1665	2748	4413	41	32	53	113	181	166	8.3
40	7229	284	7513	250	46	333	71	1878	404	78.5
41	5223	0	5223	49	16	84	0	256	84	67.2
42	1892	0	1892	165	111	210	0	312	210	32.7
43	908	0	908	79	28	25	0	72	25	65.3
44	643	0	643	137	54	35	0	88	35	60.2
45	4958	0	4958	155	64	317	0	768	317	58.7
Total								36,591	18,409	49.7

Table H10. TOTAL MASS REMOVAL OF VOLATILE SUSPENDED SOLIDS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE II

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	1681	96896	98577	475	69	116	46026	46824	46142	1.5
25	5942	0	5942	48	28	166	0	285	166	41.8
26	22899	26116	49015	86	26	595	2246	4215	2841	32.6
27	1173	0	1173	61	21	25	0	72	25	65.3
28	5431	1136	6549	136	14	76	154	891	230	74.2
29	6321	21593	27914	300	20	126	6478	8374	6604	21.1
30	3066	0	3066	217	16	49	0	665	49	92.6
31	17865	1892	19757	100	37	661	189	1976	850	57.0
32	27290	11734	39024	26	42	1146	305	1015	1451	0.0
33	--	--	--	--	--	--	--	--	--	--
34	5337	0	5337	464	29	155	0	2476	155	93.7
35	11166	137774	148940	335	42	469	46154	49895	46623	6.6
36	--	--	--	--	--	--	--	--	--	--
37	5905	0	5905	147	41	242	0	868	242	72.1
38	13929	131340	145269	40	6	84	5254	5811	5338	8.1
39	2044	0	2044	94	14	29	0	192	29	84.9
40	--	--	--	--	--	--	--	--	--	--
41	9841	0	9841	287	19	187	0	2824	187	93.4
42	2536	757	3293	127	33	84	96	418	180	56.9
43	1703	0	1703	140	10	17	0	238	17	92.9
44	--	--	--	--	--	--	--	--	--	--
45	6170	0	6170	113	52	321	0	697	321	53.9
Total								127,736	111,450	12.7

Table H11. TOTAL MASS REMOVAL OF TOTAL PHOSPHORUS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE I

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	7684	5660	13344	3.53	0.82	6.3	20.0	47.1	26.3	44.2
25	3899	2073	5972	2.49	1.44	5.6	5.2	14.9	10.8	27.5
26	32135	22634	54769	3.79	0.83	26.7	85.8	207.6	112.5	45.8
27	946	0	946	2.73	2.69	2.5	0	2.6	2.5	3.8
28	2612	762	3374	2.72	2.07	5.4	2.1	9.2	7.5	18.5
29	3369	16105	19474	3.13	1.55	5.2	50.4	61.0	55.6	8.9
30	2536	667	3203	5.12	3.59	9.1	3.4	16.4	12.5	23.8
31	24565	0	24565	2.54	1.73	42.5	0	62.4	42.5	31.9
32	21574	366	21940	2.97	1.23	26.5	1.1	65.2	27.6	57.7
33	15973	21832	37805	--	--	--	--	--	--	--
34	3217	1407	4624	4.86	1.75	5.6	6.8	22.5	12.4	44.9
35	36639	7042	43681	2.31	2.03	74.4	16.3	100.9	90.7	10.1
36	1892	0	1892	2.51	0.66	1.2	0	4.7	1.2	74.5
37	7684	2080	9764	4.01	1.34	10.3	8.3	39.2	18.6	52.6
38	15254	33255	48509	1.86	0.46	7.0	61.9	90.2	68.9	23.6
39	1665	2748	4413	2.58	1.80	3.0	7.1	11.4	10.1	11.4
40	7229	284	7513	3.75	1.87	13.5	1.1	28.2	14.6	48.2
41	5223	0	5223	2.55	0.87	4.5	0	13.3	4.5	66.2
42	1892	0	1892	4.15	1.96	3.7	0	7.9	3.7	53.2
43	908	0	908	3.35	1.85	1.7	0	3.0	1.7	43.3
44	643	0	643	2.07	1.30	0.8	0	1.3	0.8	38.5
45	4958	0	4958	2.82	1.44	7.1	0	14.0	7.1	49.3
Total								823.0	532.1	35.3

Table H12. TOTAL MASS REMOVAL OF TOTAL PHOSPHORUS FROM COMBINED SEWER OVERFLOW VOLUMES - SITE II

Run	Plant Vol cu m	Bypass Vol cu m	Total Vol cu m	mg/l in	mg/l out	kg out Plant	kg out Bypass	kg in	Total kg out	Percent Removal
24	1681	96896	98577	4.90	0.42	0.7	474.8	483.0	475.5	1.6
25	5942	0	5942	1.47	0.56	3.3	0	8.7	3.3	62.1
26	22899	26116	49015	1.00	0.56	12.8	26.1	49.0	38.9	20.6
27	1173	0	1173	2.21	0.74	0.9	0	2.6	0.9	65.4
28	5431	1136	6549	2.99	0.21	1.1	3.4	19.6	4.5	77.0
29	6321	21593	27914	4.14	0.93	5.9	89.4	115.6	95.3	17.6
30	3066	0	3066	4.92	0.43	1.3	0	15.1	1.3	91.4
31	17865	1892	19757	1.66	0.78	13.9	3.1	32.8	17.0	48.2
32	27290	11734	39024	1.07	1.07	29.2	12.6	41.8	41.8	0.0
33	--	--	--	--	--	--	--	--	--	--
34	5337	0	5337	5.62	1.15	6.1	0	30.0	6.1	79.7
35	11166	137774	148940	3.54	0.86	9.6	487.7	527.2	497.3	5.7
36	--	--	--	--	--	--	--	--	--	--
37	5905	0	5905	1.85	0.69	4.1	0	10.9	4.1	62.4
38	13929	131340	145269	1.49	0.28	3.9	195.7	216.5	199.6	7.8
39	2044	0	2044	1.65	0.57	1.2	0	3.4	1.2	64.7
40	--	--	--	--	--	--	--	--	--	--
41	9841	0	9841	4.06	0.38	3.7	0	40.0	3.7	90.8
42	2536	757	3293	2.57	0.29	0.7	1.9	8.5	2.6	69.4
43	1703	0	1703	3.51	0.72	1.2	0	6.0	1.2	80.0
44	--	--	--	--	--	--	--	--	--	--
45	6170	0	6170	1.48	0.63	3.9	0	9.1	3.9	57.1
Total								1619.8	1398.2	13.7

APPENDIX V-A

ROOT RIVER QUALITY DATA

Table A1. SPECIFIC CONDUCTANCE
1971 DRY WEATHER DATA (MEAN PER DAY)
(μ mhos/cm)

Dry Weather No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
04-06	227	210	215	463	472	424	887	883	1029
Range	213-238	180-250	180-250	400-613	400-563	413-438	810-920	810-960	960-1063
07-09	222	246	231	610	535	479	691	680	740
Range	180-275	225-260	213-263	600-620	420-600	462-520	613-713	620-740	740-740
11-13	202	205	194	238	267	241	900	843	814
Range	175-220	175-225	187-213	238-238	238-280	213-280	800-950	800-950	800-900
14-15	160	150	--	381	276	--	913	841	--
Range	150-175	150-150	--	320-450	220-320	--	913-913	775-913	--
16-18	214	275	243	414	438	405	850	861	854
Range	200-250	250-300	175-300	363-438	400-500	387-425	838-863	838-875	838-875
19-21	279	271	291	377	344	337	679	806	820
Range	213-300	213-300	275-300	362-400	337-375	337-337	613-763	763-838	800-838

Table A2. SPECIFIC CONDUCTANCE
1971 STORM DATA (MEAN PER DAY)
(μ mhos/cm)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
1	210	203	200	838	797	66	840	748	803
Range	187-237	187-225	175-250	800-875	700-860	560-780	737-912	700-780	838-960
2	180	180	203	619	804	859	948	856	643
Range	163-195	163-225	163-225	425-800	763-900	800-1100	850-1100	763-913	600-763
3	192	217	225	412	396	363	718	747	764
Range	175-213	175-238	200-275	400-450	387-400	325-401	650-763	637-813	700-837
4	209	204	187	181	200	--	714	769	797
Range	200-250	175-237	175-200	163-200	200-200	--	710-725	710-863	725-900
5	--	--	--	--	--	--	--	--	--
Range	--	--	--	--	--	--	--	--	--
6	152	174	177	297	419	488	852	747	701
Range	150-163	150-205	150-205	240-401	400-463	463-500	500-900	700-800	695-713
7	225	234	241	575	538	561	800	800	823
Range	225-225	225-238	225-250	575-575	480-575	500-580	800-800	800-800	800-900
8	341	327	353	504	572	603	841	821	816
Range	338-350	310-350	338-375	463-600	538-600	600-620	825-863	800-850	800-863
9	316	345	282	634	671	673	--	--	--
Range	275-350	300-370	225-325	625-638	638-700	650-700	--	--	--
10	238	245	246	479	524	541	806	836	884
Range	225-250	238-263	225-250	460-500	480-560	520-550	800-820	800-875	875-900

Table A2 (continued). SPECIFIC CONDUCTANCE
1971 STORM DATA (MEAN PER DAY)
(μ mhos/cm)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
11	421	507	462	609	521	--	783	527	500
Range	375-475	475-550	406-512	563-638	500-587	--	625-913	500-625	500
12	213	250	256	394	411	426	1000	985	965
Range	175-238	138-263	237-263	375-400	400-420	413-438	1000-1000	962-1000	962-970

Table A3. SPECIFIC CONDUCTANCE 1973 STORM DATA (MEAN PER DAY) (μ mhos/cm)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
1	376	397	386	--	369	397	--	--	--
Range	360-380	380-400	360-400	--	360-380	380-420	--	--	--
2	500	426	423	430	465	494	--	--	--
Range	480-510	415-480	420-440	420-440	440-480	480-500	--	--	--
3	680	610	543	--	--	--	--	--	--
Range	660-700	540-560	--	--	--	--	--	--	--
4	Monitored as Part of Storm 3								
Range									
5	590	531	See	620	600	See	720	720	See
Range	420-700	360-700	Storm 6	600-640	600-620	Storm 6	720-720	720-720	Storm 6
6	713	598	482	600	624	506	720	720	733
Range	700-740	500-780	460-510	600-620	600-640	480-580	720-720	720-720	730-740
7	408	296	275	600	596	455	--	--	--
Range	330-560	250-400	235-360	600-600	500-620	440-500	--	--	--
8	360	313	See	585	562	See	740	740	See
Range	300-480	240-440	Storm 9	520-600	520-600	Storm 9	--	--	Storm 9
9	--	287	256	583	560	523	740	740	740
Range	--	250-370	235-300	560-620	540-590	405-560	--	--	--
10	Not Monitored								
Range									
11	Not Monitored								
Range									

Table A3. (continued). SPECIFIC CONDUCTANCE
1973 STORM DATA (MEAN PER DAY)
(μ mhos)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
12	323	359	380	518	520	--	907	909	948
Range	280-360	255-405	280-400	460-540	520-520	--	820-1040	870-980	880-1060
13	312	304	319	--	--	--	600	609	516
Range	300-325	300-325	300-355	--	--	--	480-700	560-680	48-460
14	325	351	351	895	974	625	--	839	900
Range	280-380	310-390	300-390	800-1000	920-1020	730-940	--	400-900	880-940
15	160	--	350	830	872	852	964	966	906
Range	160-160	--	335-365	780-860	860-880	800-880	940-990	940-1000	840-1000
16	350	373	376	852	893	933	906	808.8	789.0
Range	335-365	330-420	305-483	800-880	860-920	920-940	840-1000	780-840	760-850
17	415	564	639	774	848	714	770	552	599
Range	365-490	380-640	500-680	720-840	720-880	620-820	660-820	490-660	560-640
18	418	377	314	990	968	906	970	954	954
Range	350-495	300-455	290-370	980-1000	960-980	840-960	960-990	940-960	940-960
19	351	360	468	1006	1052	1080	957	968	1044
Range	195-460	315-435	380-600	960-1120	1010-1080	1020-1100	940-970	940-1050	1022-1060
20	367	375	386	1123	874	826	699	666	641
Range	240-480	240-580	240-500	1120-1130	840-940	820-840	640-810	640-720	420-790
21	409	521	502	948	888	799	984	937	895
Range	350-490	440-600	240-640	900-970	740-930	700-930	920-1080	920-960	880-920
22	532	518	482	803	632.4	608	783	600	586
Range	330-840	493-560	465-510	640-900	610-690	580-620	560-940	560-670	570-600

Table A4. SPECIFIC CONDUCTANCE
1974 STORM DATA (MEAN PER DAY)
(μ mhos/cm)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
23	622	709	660	--	--	--	--	--	--
Range	420-720	685-720	650-680	--	--	--	--	--	--
24	731	762	601	--	--	--	--	--	--
Range	700-760	720-780	--	--	--	--	--	--	--
25	752	751	826	--	--	--	--	--	--
Range	730-790	730-790	780-840	--	--	--	--	--	--
26	522	466	525	567	596	609	--	--	--
Range	400-780	380-620	420-600	505-790	540-640	560-640	--	--	--
27	449	713	765	734	740	734	716	715	748
Range	340-640	440-780	740-790	725-740	740-740	730-740	710-720	700-720	720-780
28	706	658	800	736	763	764	731	782	704
Range	620-820	620-720	680-860	710-760	750-790	710-800	706-750	750-800	650-760
29	800	763	391	764	690	586	704	606	521
Range	680-860	700-840	140-700	710-800	640-720	560-640	650-760	500-690	480-600
30	391	614	682	586	639	661	521	627	670
Range	140-700	140-680	640-720	560-640	600-660	600-680	480-600	560-660	640-700
31	682	720	720	661	626	487	670	564	547
Range	640-720	710-720	720-720	600-680	560-690	440-560	640-700	440-690	440-600

Table A4 (continued). SPECIFIC CONDUCTANCE
1974 STORM DATA (MEAN PER DAY)
(μ mhos/cm)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
32	720	720	720	626	487	448	564	547	--
Range	720-720	--	--	560-690	440-560	420-490	440-690	440-600	--
33	720	720	726	487	448	536	547	--	--
Range	720-720	720-720	720-740	440-560	420-490	490-570	440-600	--	--
34	580	443	396	600	458	457	720	737	644
Range	400-640	340-580	340-420	590-600	440-520	440-470	700-740	620-780	500-800
35	580	443	396	600	458	457	720	737	644
Range	400-640	340-580	340-420	590-600	440-520	440-470	700-740	620-780	500-800
36	352	326	333	758	652	708	785	789	779
Range	300-490	300-350	300-520	700-780	580-710	620-740	620-860	730-840	400-860
37	326	333	434	652	708	534	789	779	365
Range	300-350	300-520	390-520	580-710	620-740	460-700	730-840	400-860	270-580
38	434	366	428	534	460	488	365	291	434
Range	390-520	320-440	340-470	460-700	440-460	460-520	270-580	270-320	320-540
39	428	378	316	488	568	620	434	622	741
Range	340-470	270-500	280-440	460-520	520-610	610-640	320-540	530-700	680-840
40	320	--	--	237	658	686	886	900	922
Range	275-420	--	--	40-680	580-680	600-740	870-900	880-920	910-940

Table A4 (continued). SPECIFIC CONDUCTANCE
1974 STORM DATA (MEAN PER DAY)
(μ mhos/cm)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
41	396	404	344	--	648	726	909	890	893
Range	340-500	370-460	280-420	--	560-700	660-780	860-1180	880-900	820-1160
42	329	364	383	720	742	747	960	970	945
Range	275-390	295-415	320-435	640-760	700-780	680-780	930-980	960-980	910-960
43	332	303	296	714	606	737	909	932	901
Range	285-360	280-360	285-320	640-760	70-800	520-820	880-920	880-920	--
44	282.2	305	309	652	574	652	1066	1002	952
Range	280-300	280-390	290-350	540-740	500-680	560-740	1040-1080	960-1040	930-960
45	356	359	--	730	766	758	952	875	822
Range	290-445	290-410	--	600-800	720-820	640-800	920-970	780-920	780-840

Table A5. TEMPERATURE
1971 DRY WEATHER DATA (MEAN PER DAY)
(°C)

Dry weather period	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
4-6	--	--	--	--	---	--	27.9	26.3	26.0
Range	--	--	--	--	--	--	26.7 - 29.2	29.2 - 28.3	23.3 - 28.9
7-9	14.8	16.6	17.3	22.8	20.3	21.3	25.3	25.1	25.8
Range	12.5 - 16.7	15.6 - 18.3	16.7 - 18.3	22.7 - 23.3	18.9 - 20.7	20.8 - 21.7	22.8 - 28.9	22.8 - 26.7	23.3 - 28.6
11-13	15.1	15.1	12.4	17.5	17.8	17.2	23.4	21.7	21.7
Range	14.4 - 15.6	13.6 - 15.6	10.6 - 13.9	16.7 - 17.8	17.2 - 18.3	16.7 - 18.3	22.2 - 25.0	20.0 - 24.2	19.7 - 23.3
14-15	11.7	10.1	--	18.2	16.0	--	26.7	26.7	--
Range	10.3 - 14.4	10.0 - 10.3	--	17.2 - 19.4	15.6 - 17.2	--	24.7 - 28.3	25.6 - 28.9	--
16-18	15.7	17.7	17.6	20.5	20.2	20.2	26.8	25.7	25.1
Range	16.1 - 18.1	17.2 - 18.6	16.7 - 18.6	19.4 - 21.1	18.3 - 21.1	20.0 - 20.6	24.4 - 28.9	23.1 - 30.0	22.8 - 29.4
19-21	6.5	6.1	6.3	6.4	7.1	7.4	4.5	6.1	7.6
Range	6.1 - 6.7	6.1 - 6.1	6.1 - 6.4	5.6 - 6.7	6.7 - 7.2	6.9 - 7.8	3.6 - 5.6	5.0 - 7.2	6.7 - 8.6

Table A6. TEMPERATURE
1971 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
1	13.9	13.4	13.1	--	--	--	25.1	24.8	23.7
Range	12.8 - 15.6	12.8 - 14.4	11.7 - 14.4	--	--	--	21.9 - 28.9	23.1 - 26.7	22.2 - 25.6
2	--	--	--	--	--	--	26.2	24.7	23.8
Range	--	--	--	--	--	--	23.9 - 28.3	23.9 - 26.1	22.2 - 26.1
3	15.9	17.4	17.1	21.6	21.6	21.2	26.9	25.1	23.6
Range	15.6 - 16.7	15.6 - 18.3	15.0 - 18.3	20.8 - 22.5	21.1 - 22.2	20.1 - 22.2	25.6 - 28.3	23.1 - 26.7	22.2 - 24.7
4	13.1	14.4	12.4	17.4	17.9	18.9	24.4	23.0	23.6
Range	11.1 - 15.6	11.9 - 15.8	11.4 - 13.9	15.8 - 18.3	16.7 - 18.9	17.8 - 21.1	22.8 - 23.9	22.2 - 24.4	21.7 - 25.0
5	8.7	9.3	12.6	14.5	14.7	15.9	--	23.8	22.2
Range	8.3 - 8.9	8.3 - 11.7	11.7 - 14.2	13.6 - 15.6	13.6 - 16.1	15.0 - 16.7	--	21.1 - 26.7	20.0 - 24.4
6	10.6	11.9	12.1	16.3	17.5	17.3	25.8	24.1	22.8
Range	10.0 - 22.8	10.8 - 13.6	11.1 - 13.6	15.6 - 17.2	16.7 - 18.3	15.6 - 18.3	23.3 - 28.3	22.5 - 26.7	20.8 - 25.0
7	17.8	17.6	17.6	19.7	19.7	20.5	--	--	--
Range	16.9 -	17.2 - 18.6	17.2 - 23.3	18.9 - 17.8	19.2 - 21.1	19.7 - 20.3	-- 21.1	--	--

Table A6 (continued). TEMPERATURE
1971 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
8	18.3	17.2	17.2	17.9	17.6	17.6	16.9	16.7	17.0
Range	18.1 - 18.7	16.9 - 18.1	16.9 - 17.8	17.8 - 18.3	17.2 - 17.8	17.2 - 17.8	14.4 - 21.1	13.1 - 21.1	14.2 - 22.8
9	16.9	16.4	14.5	--	--	--	--	--	--
Range	16.6 - 17.2	15.0 - 17.2	12.8 - 15.6	--	--	--	--	--	--
10	11.1	11.3	12.0	--	--	--	14.9	14.8	16.3
Range	11.1 - 11.1	11.1 - 11.7	11.7 - 12.2	--	--	--	12.2 - 19.4	10.0 - 18.6	13.9 - 21.1
11	12.7	12.0	10.7	8.1	7.1	--	8.5	8.1	9.8
Range	12.2 - 13.3	11.1 - 12.5	10.0 - 11.1	7.5 - 8.3	6.1 - 8.3	--	6.7 - 10.0	7.5 - 8.9	8.9 - 10.6
12	8.3	8.3	7.8	9.6	9.5	8.4	8.1	6.4	3.8
Range	8.3 - 8.9	7.8 - 8.3	7.8 - 8.3	8.9 - 10.0	8.9 - 10.0	7.7 - 8.9	6.1 - 10.6	5.0 - 7.6	1.7 - 5.0

Table A7. TEMPERATURE
1973 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
1	14.4	14.4	13.3	--	--	--	18.9	19.4	20.0
Range	14.4 - 15.0	13.3 - 15.0	12.2 - 12.8	--	--	--	18.9 - 18.9	18.9 - 20.0	20.0 - 20.6
2	13.9	17.2	13.9	--	--	--	20.6	20.0	20.0
Range	13.9 - 13.9	16.1 - 17.8	12.8 - 16.1	--	--	--	20.6 - 20.6	20.0 - 20.6	20.0 - 21.1
3	13.9	13.9	15.0	10.6	11.1	14.4	14.4	13.3	11.7
Range	13.9 - 14.4	13.3 - 14.4	14.4 - 15.0	10.0 - 11.1	9.4 - 13.3	13.9 - 14.4	11.7 - 16.1	11.7 - 16.1	10.6 - 11.7
4	Monitored as part of Storm 3.								
Range									
5	15.6	14.4	18.3	17.2	18.9	18.9	15.0	14.4	14.4
Range	14.4 - 16.1	12.8 - 17.2	17.8 - 20.6	16.1 - 18.3	17.2 - 20.0	17.8 - 19.4	14.4 - 15.0	14.4 - 15.0	14.4 - 14.4
6	18.3	15.6	16.1	18.9	18.3	15.6	14.4	14.4	14.4
Range	17.8 - 20.6	15.0 - 16.1	14.4 - 16.7	17.8 - 19.4	16.1 - 20.0	15.0 - 16.7	14.4 - 14.4	14.4 - 14.4	14.4 - 15.0
7	15.0	15.6	12.2	22.8	22.2	21.1	--	--	--
Range	11.7 - 22.8	11.7 - 26.1	9.4 - 18.3	22.2 - 22.8	21.7 - 22.2	20.0 - 22.2	--	--	--

Table A7 (continued). TEMPERATURE
1973 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
8	16.7	15.6	--	22.8	21.1	21.7	13.9	14.4	15.0
Range	13.3 - 22.2	12.8 - 21.1	--	21.1 - 23.9	20.1 - 22.2	18.9 - 23.3	--	--	
9	--	12.8	13.9	21.7	20.0	22.2	15.0	15.0	15.0
Range	--	11.7 - 21.1	11.1 - 15.6	18.9 - 23.3	18.3 - 22.8	21.7 - 23.3	--	--	--
10	--	--	--	--	--	--	--	--	--
Range	--	--	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--	--	--
Range	--	--	--	--	--	--	--	--	--
12	16.1	21.1	23.3	23.9	23.3	--	21.7	21.1	21.7
Range	14.4 - 23.3	17.2 - 23.3	21.1 - 25.0	21.1 - 25.0	22.8 - 23.3	--	21.1 - 22.8	20.6 - 21.1	20.0 - 22.8
13	9.4	8.3	7.7	--	--	--	20.2	21.1	18.9
Range	8.3 - 10.0	7.2 - 9.4	6.7 - 11.1	--	--	--	17.8 - 21.1	20.0 - 22.2	17.8 - 20.0
14	16.7	14.4	15.0	16.7	16.7	15.6	12.2	13.9	15.0
Range	16.1 - 17.2	12.8 - 16.1	12.8 - 16.7	16.7 - 17.2	15.6 - 17.8	15.0 - 22.2	9.4 - 16.1	8.9 - 18.3	13.9 - 16.7

Table A7 (continued). TEMPERATURE
1973 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
15	18.3	--	21.1	16.1	16.7	16.7	18.3	18.9	17.8
Range	17.8 - 18.3	--	16.7 - 30.6	15.6 - 16.7	16.1 - 17.2	16.1 - 17.2	15.6 - 22.2	16.7 - 22.8	15.6 - 20.6
16	21.1	26.1	33.3	16.7	17.8	18.9	17.8	19.4	20.6
Range	16.7 - 30.6	16.7 - 35.6	31.7 - 35.6	16.1 - 17.2	17.2 - 18.3	18.3 - 19.4	15.6 - 20.6	17.8 - 21.1	19.4 22.8
17	16.1	17.2	17.2	18.9	17.2	16.7	17.2	16.7	16.7
Range	15.0 - 17.8	15.6 - 18.3	17.2 - 17.8	17.8 - 19.4	17.2 - 17.8	16.7 - 17.2	16.7 - 17.8	16.1 - 16.7	15.6 - 16.7
18	16.7	13.9	11.7	18.3	18.3	17.8	19.4	18.9	17.2
Range	15.6 - 17.8	11.7 - 16.1	11.1 - 13.3	17.8 - 18.3	17.8 - 18.9	17.2 - 18.3	18.3 - 21.1	17.2 - 20.6	15.6 - 18.9
19	10.0	8.9	9.4	12.8	12.2	11.1	12.8	11.1	10.0
Range	8.3 - 11.7	10.0 - 14.4	8.9 - 10.0	12.2 - 12.8	11.7 - 12.2	10.6 - 11.7	11.7 - 13.3	10.6 - 13.3	9.4 - 10.6
20	8.3	7.2	7.2	8.9	7.8	7.8	9.4	8.3	7.8
Range	7.8 - 8.9	6.7 - 8.3	7.2 - 7.2	8.9 - 8.9	7.8 - 8.3	7.8 - 7.8	9.9 - 9.4	7.2 - 8.9	7.2 - 8.9

Table A7 (continued). TEMPERATURE
1973 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
21	3.9	3.3	3.3	3.9	6.1	5.6	7.8	7.2	5.6
Range	2.8 - 4.4	3.3 - 3.9	2.8 - 3.3	3.3 - 5.6	5.6 - 6.1	4.4 - 6.1	7.2 - 8.3	6.1 - 7.8	4.4 - 6.1
22	5.6	5.6	3.3	5.0	5.0	3.3	6.1	6.1	5.6
Range	5.0 - 6.1	3.9 - 6.1	2.2 - 3.9	5.0 - 6.1	4.4 - 5.6	2.2 - 4.4	5.6 - 6.1	5.0 - 7.8	8.4 - 6.7

Table A8. TEMPERATURE
1974 STORM DATA (MEAN PER DAY)
(^{o}C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
23	2.00	2.33	2.33	--	--	--	--	--	--
Range	1.11 - 2.77	2.22 - 2.77	2.22 - 3.33	--	--	--	--	--	--
24	11.11	9.72	7.50	--	--	--	--	--	--
Range	10.56 - 11.67	8.33 - 10.56	6.67 - 8.33	--	--	--	--	--	--
25	9.83	9.83	13.5	--	--	--	--	--	--
Range	8.89 - 11.67	8.89 - 11.6	12.22 - 14.44	--	--	--	--	--	--
26	16.83	15.44	14.56	16.94	15.94	15.28	15.89	15.17	14.22
Range	12.78 - 20.00	12.78 - 17.78	11.67 - 17.22	16.67 - 17.78	15.56 - 16.67	14.44 - 16.11	15.56 - 16.67	14.44 - 15.56	13.33 - 15.00
27	10.44	12.39	11.72	14.67	13.44	12.56	13.50	12.56	11.94
Range	8.89 - 12.78	10.00 - 12.78	11.11 - 12.22	13.89 - 15.56	12.78 - 13.89	11.67 - 13.33	12.32 - 15.56	10.56 - 14.44	10.00 - 13.89
28	9.11	9.61	11.39	9.28	10.83	11.33	10.11	11.22	12.33
Range	8.89 - 10.00	8.33 - 11.00	10.56 - 12.22	8.89 - 10.00	9.44 - 11.67	10.56 - 12.22	8.33 - 11.67	8.89 - 13.33	10.56 - 13.89
29	11.39	12.33	10.28	11.33	12.28	9.89	12.33	11.94	9.94
Range	10.56 - 12.22	11.67 - 12.78	8.89 - 11.67	10.56 - 12.22	11.11 - 12.78	8.89 - 11.11	10.56 - 13.89	11.11 - 13.33	8.89 - 11.11

Table A8 (continued) TEMPERATURE
1974 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
30	10.28	10.00	11.50	9.89	9.44	11.00	9.94	10.33	11.78
Range	8.89 - 11.67	8.89 - 11.67	11.11 - 12.22	8.89 - 11.11	8.33 - 11.11	10.00 - 12.22	8.89 - 11.11	8.80 - 11.67	10.56 - 12.78
31	11.50	11.72	11.28	11.00	11.33	10.72	11.78	11.56	11.28
Range	11.11 - 12.22	11.11 - 12.78	10.56 - 11.67	10.00 - 11.67	10.00 - 12.22	10.00 - 11.11	8.89 - 11.67	11.11 - 12.78	10.56 - 12.22
32	11.72	11.28	11.67	11.33	10.72	11.17	11.56	11.28	14.78
Range	11.11 - 12.78	10.56 - 11.67	11.11 - 12.22	10.00 - 12.22	10.00 - 11.11	11.11 - 11.66	11.11 - 12.77	10.55 - 12.22	12.22 - 16.11
33	11.28	11.67	11.89	10.72	11.16	11.44	11.27	14.77	17.11
Range	11.67 - 10.56	11.11 - 12.22	11.11 - 12.78	10.00 - 11.11	11.11 - 11.66	10.55 - 12.22	10.55 - 12.22	12.22 - 16.11	13.33 - 21.11
34	14.88	15.66	17.33	14.61	17.88	18.16	17.11	18.33	18.50
Range	11.66 - 16.11	12.22 - 19.44	13.33 - 19.44	14.44 - 15.00	16.66 - 18.33	17.77 - 18.88	14.44 - 20.55	17.77 - 20.55	17.77 - 19.44
35	14.88	15.66	17.33	14.61	17.88	18.16	17.11	18.33	18.50
Range	11.66 - 16.11	12.22 - 19.44	13.33 - 19.44	14.44 - 15.00	16.66 - 18.33	17.77 - 18.88	14.44 - 20.55	17.77 - 20.55	17.77 - 19.44
36	11.16	10.11	10.00	19.77	18.88	19.77	19.72	19.44	20.00
Range	10.00 - 15.00	9.44 - 11.11	8.88 - 12.77	17.77 - 20.55	18.33 - 19.44	18.88 - 21.11	19.44 - 20.55	18.88 - 20.55	18.33 - 22.22

Table A8 (continued). TEMPERATURE
1974 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A Day 1	Point A Day 2	Point A Day 3	Point B Day 1	Point B Day 2	Point B Day 3	Point C Day 1	Point C Day 2	Point C Day 3
37	10.11	10.00	14.44	18.88	19.77	18.66	19.44	20.00	20.00
Range	9.44 - 11.11	8.88 - 12.77	10.00 - 18.33	18.33 - 19.44	18.88 - 21.11	17.22 - 20.55	18.88 - 20.55	18.33 - 23.22	17.22 - 24.44
38	14.44	15.77	16.55	18.66	18.33	16.77	20.00	18.44	16.94
Range	10.00 - 18.33	11.66 - 18.33	8.33 - 17.77	17.22 - 20.55	17.22 - 19.44	16.11 - 17.22	17.22 - 24.44	17.77 - 18.88	16.66 - 17.77
39	16.55	12.00	9.33	16.77	16.44	17.66	16.94	16.88	17.88
Range	8.33 - 17.77	8.33 - 17.22	8.33 - 11.11	16.11 - 17.22	15.00 - 17.77	16.66 - 18.88	16.66 - 17.77	15.55 - 17.77	16.66 - 18.88
40	--	--	--	22.05	23.00	22.66	25.16	23.61	23.72
Range	--	--	--	20.00 - 25.55	20.55 - 25.55	20.55 - 23.88	23.33 - 27.22	21.66 - 25.55	21.11 - 26.66
41	18.61	18.77	16.94	19.88	21.05	23.33	25.16	23.61	22.77
Range	17.22 - 20.00	15.00 - 23.33	14.44 - 18.33	17.77 - 21.11	17.77 - 23.33	22.22 - 24.44	23.33 - 27.22	21.66 - 26.11	21.66 - 23.33
42	18.88	18.27	19.66	22.44	22.38	22.27	22.22	22.22	23.38
Range	16.11 - 21.11	16.11 - 19.44	19.44 - 20.55	21.66 - 22.77	21.66 - 23.88	18.33 - 27.77	20.55 - 23.88	20.55 - 25.55	20.55 - 26.11
43	19.11	18.05	16.61	22.27	22.50	22.50	21.50	24.33	24.83
Range	18.33 - 20.00	17.22 - 18.88	13.33 - 18.33	21.11 - 23.33	21.11 - 25.55	20.00 - 23.88	20.00 - 25.55	21.94 - 26.66	21.11 - 29.44

Table A8 (continued). TEMPERATURE
1974 STORM DATA (MEAN PER DAY)
(°C)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
44	11.38	10.11	11.22	20.77	19.94	20.00	23.50	22.61	23.33
Range	9.44 - 16.11	8.88 - 11.66	10.00 - 12.77	18.88 - 23.33	16.11 - 20.00	17.11 - 21.66	21.11 - 26.66	21.11 - 23.88	21.66 - 25.55
45	14.77	15.55	--	20.50	21.05	21.44	23.11	22.00	22.55
Range	12.22 - 17.77	14.44 - 16.66	--	17.77 - 21.66	20.00 - 22.22	19.44 - 23.33	21.11 - 25.00	20.00 - 24.44	20.00 - 25.00

Table A9. DISSOLVED OXYGEN
1971 DRY WEATHER DATA (MEAN PER DAY)

Dry Weather Period	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
04-06	8.0	7.9	7.5	2.8	2.7	2.2	1.8	1.9	1.8
Range	7.8-8.2	7.0-8.7	7.0-8.2	1.7-3.9	1.1-4.4	1.6-3.0	0.1-4.6	0.0-4.5	0.0-5.5
07-09	8.4	7.9	7.6	3.2	4.5	4.2	2.5	1.5	1.1
Range	8.0-9.0	7.6-8.3	7.1-8.3	1.9-4.2	3.5-6.0	3.5-5.0	1.0-5.0	0.1-3.2	0.0-3.3
11-13	8.0	7.7	7.9	8.0	7.4	5.7	--	--	--
Range	7.6-8.4	7.4-8.0	7.6-8.2	7.4-8.5	6.1-8.0	4.5-6.5	--	--	--
14-15	8.3	8.8	--	6.6	6.4	--	--	--	--
Range	8.0-8.5	8.5-9.0	--	5.6-7.5	6.0-7.0	--	--	--	--
16-18	6.5	6.3	6.0	5.3	5.8	5.1	2.0	2.4	2.9
Range	5.8-7.3	5.5-6.8	5.2-7.0	4.0-7.7	4.0-7.5	3.8-7.0	1.8-2.3	1.2-4.0	1.5-5.4
19-21	9.6	10.4	10.2	6.6	7.1	7.8	4.0	3.0	2.1
Range	9.3-10.5	10.0-10.8	10.0-10.5	6.2-7.5	6.7-7.6	6.7-8.5	3.4-4.5	2.6-3.4	1.2-2.6

Table A10. DISSOLVED OXYGEN
1971 STORM DATA (MEAN PER DAY)
(mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
1	--	--	--	4.9	6.1	5.0	3.1	2.9	4.1
Range	--	--	--	2.7-8.1	3.9-8.4	2.5-7.1	1.0-6.2	1.0-5.8	2.8-5.0
2	6.9	6.8	6.8	5.1	3.0	4.0	2.6	5.7	4.0
Range	6.2-7.8	6.0-7.3	6.3-7.8	3.2-7.2	1.8-4.5	3.2-4.5	0.1-5.2	5.2-6.2	2.5-5.7
3	8.0	7.3	6.8	5.9	4.4	4.3	3.8	2.6	3.0
Range	7.8-8.7	6.2-8.2	6.2-7.3	5.0-6.8	3.5-5.5	3.3-4.8	1.0-5.6	1.0-6.5	1.0-5.7
4	8.9	7.9	7.8	5.7	5.6	5.5	--	--	--
Range	8.7-9.0	7.0-8.7	7.0-8.5	5.0-6.0	4.0-7.0	3.8-8.0	--	--	--
5	8.6	8.6	8.3	8.9	7.1	5.4	--	--	3.9
Range	8.0-9.0	8.3-9.0	8.6-8.9	8.7-9.2	5.8-8.7	5.0-6.0	--	--	2.5-6.0
6	6.3	7.9	8.0	6.8	3.3	3.6	0.7	0.1	0.1
Range	6.0-6.6	7.6-8.4	7.6-8.2	5.0-8.0	2.0-5.0	2.0-5.0	0.0-3.9	0.0-0.5	0.0-0.5
7	5.6	5.8	5.1	5.6	4.5	4.8	1.9	4.4	5.4
Range	5.3-6.0	5.1-6.5	4.4-5.8	4.9-7.0	3.7-5.4	3.7-6.5	0.0-6.0	0.0-7.5	3.5-9.0
8	6.4	6.3	5.4	5.1	5.8	7.2	2.1	1.9	1.2
Range	4.8-7.7	6.0-7.2	4.9-6.0	4.0-6.0	4.7-7.0	6.5-7.9	1.6-2.5	0.8-2.2	0.6-1.8
9	7.3	6.7	8.4	6.3	6.8	7.2	--	--	--
Range	6.3-8.0	6.0-7.5	7.5-9.0	6.0-6.4	6.0-8.0	6.6-8.0	--	--	--

Table A10 (continued). DISSOLVED OXYGEN
1971 STORM DATA (MEAN PER DAY)
(mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
10	7.3	6.7	7.0	4.5	5.5	6.5	1.9	1.1	0.6
Range	6.8-8.0	5.8-7.5	6.3-8.4	4.0-5.0	4.5-6.5	5.5-7.0	1.0-2.6	0.6-1.8	0.6-0.6
11	5.0	4.0	4.4	10.2	9.7	--	3.1	3.3	3.6
Range	4.2-5.5	3.7-5.2	4.0-8.4	10.0-10.5	8.5-10.0	--	2.6-3.5	3.1-3.6	3.4-3.7
12	10.3	9.3	8.6	6.4	6.6	--	2.3	3.5	4.6
Range	10-10.4	8.8-10.0	8.4-9.0	5.5-7.5	6.0-7.0	--	2.1-2.6	2.5-4.5	4.3-5.0

Table A11. DISSOLVED OXYGEN
1973 STORM DATA (MEAN PER DAY)
(mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
1	6.4	6.4	6.4	4.1	3.9	3.4	5.7	5.7	5.6
Range	6.2-6.6	6.2-6.7	6.2-6.4	3.6-4.7	3.0-5.0	3.1-3.7	5.7-5.7	5.6-5.7	5.5-5.6
2	6.7	6.1	6.4	3.7	3.9	4.3	5.4	5.4	5.4
Range	6.5-6.9	6.0-6.2	6.1-6.8	3.5-3.6	3.7-4.1	4.1-4.4	5.4-5.4	5.4-5.4	5.2-5.4
3	6.2	6.1	6.3	4.7	4.7	4.0	6.4	6.4	6.9
Range	6.2-6.3	5.8-6.3	6.3-6.4	4.5-4.9	4.2-5.0	3.9-4.1	6.0-6.8	6.0-6.8	6.9-7.0
4	Monitored as Part of Storm 3								
Range	Monitored as Part of Storm 3								
5	6.5	7.9	6.8	4.2	3.5	3.5	8.2	6.3	6.8
Range	5.5-9.0	7.0-9.0	2.5-8.0	3.0-5.0	2.6-4.3	2.6-4.3	6.5-8.5	6.0-6.5	6.3-7.5
6	6.8	6.5	7.1	3.5	3.7	3.3	6.8	7.6	8.3
Range	2.5-8.0	5.2-7.3	6.9-7.3	2.6-4.3	2.8-4.6	2.9-3.5	6.3-7.5	7.4-7.8	7.7-8.8
7	8.3	8.6	8.7	2.4	2.3	2.5	--	--	--
Range	7.0-8.9	7.0-9.0	7.5-9.0	2.0-2.8	2.0-2.6	2.2-2.7	--	--	--
8	6.0	7.7	--	1.5	1.8	see	8.7	8.7	8.7
Range	4.7-7.1	6.1-7.7	--	1.4-1.8	1.7-2.0	storm 9	--	--	--
9	--	6.3	6.1	1.3	--	2.5	8.7	8.7	8.7
Range	--	5.5-7.1	5.3-6.8	1.0-2.5	--	2.3-2.7	--	--	--

Table A11 (continued). DISSOLVED OXYGEN
1973 STORM DATA (MEAN PER DAY)
(mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
10	Not Monitored								
Range									
11	Not Monitored								
Range									
12	2.5	5.4	3.7	7.0	4.9	--	3.7	2.7	3.9
Range	1.8-4.5	0.8-8.3	2.7-6.3	6.1-7.7	4.4-5.7	--	28.-4.7	2.1-3.4	2.6-6.5
13	8.5	9.0	8.9	--	--	--	1.1	0.7	1.4
Range	7.5-9.1	8.4-9.4	8.2-9.4	--	--	--	0.1-2.6	0.3-1.1	0.8-2.4
14	7.6	4.5	5.8	6.0	9.5	10.2	10.35	11.4	11.4
Range	6.2-8.6	1.8-7.6	2.3-7.7	6.0-7.2	6.8-11.4	8.3-11.4	6.6-11.4	11.4-11.4	11.4-11.4
15	1.1	--	8.2	10.8	9.8	8.8	8.8	8.7	9.6
Range	0.9-1.2	--	7.9-8.4	10.1-11.4	8.8-11.4	7.7-10.0	8.2-10.5	7.0-9.7	7.7-11.3
16	8.2	8.0	7.8	8.8	8.7	8.3	9.6	10.0	9.2
Range	7.9-8.4	7.3-8.8	7.2-8.7	7.7-10.0	8.3-9.4	7.6-9.4	7.7-11.3	8.3-11.3	7.7-10.7
17	7.1	.54	6.0	3.7	6.2	7.4	5.4	5.3	5.9
Range	6.1-8.3	4.7-7.5	5.7-6.2	3.1-4.6	4.6-7.1	6.5-6.8	5.0-5.6	5.1-5.5	5.1-6.9
18	5.7	7.4	8.3	4.0	3.3	4.4	4.9	5.5	5.7
Range	5.1-6.4	5.4-8.6	7.7-8.7	3.4-4.6	2.6-4.4	3.5-5.5	4.3-5.5	4.5-6.1	5.2-6.2

Table A11 (continued). DISSOLVED OXYGEN
1973 STORM DATA (MEAN PER DAY)
(mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
19	8.4	8.0	7.3	15.1	11.6	9.4	12.0	11.5	10.2
Range	7.9-9.0	6.7-8.4	6.7-7.9	14.2-15.9	10.0-14.8	8.6-10.0	10.0-13.6	9.4-13.6	9.4-11.2
20	9.4	9.0	8.9	10.1	9.3	9.2	4.3	4.4	4.7
Range	9.1-9.5	8.8-9.2	8.4-9.2	10.0-10.3	9.1-9.5	9.0-9.5	2.2-7.0	3.1-5.6	3.9-5.1
21	8.8	8.2	7.8	9.4	8.2	7.3	--	--	--
Range	8.6-9.0	7.7-8.6	7.2-8.8	8.8-10.0	7.2-8.8	6.6-8.4	--	--	--
22	10.2	9.8	10.6	10.5	10.8	11.2	--	--	--
Range	9.4-10.8	9.3-11.8	10.2-11.0	10.1-10.8	10.7-11.0	10.8-11.4	--	--	--

Table A12. DISSOLVED OXYGEN 1974 STORM DATA (MEAN PER DAY) (mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
23	--	--	--	--	--	--	--	--	--
Range	--	--	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--	--	--
Range	--	--	--	--	--	--	--	--	--
25	9.50	9.50	6.60	--	--	--	--	--	--
Range	8.7-10.4	8.7-10.4	6.2-7.6	--	--	--	--	--	--
26	7.2	7.6	7.8	9.6	9.8	10.3	9.53	9.75	11.2
Range	5.0-9.8	5.4-8.9	6.0-10.0	9.3-10.2	9.4-10.1	9.7-10.3	9.2-10.0	9.2-10.0	10.2-11.6
27	8.9	7.8	8.61	9.9	10.9	12.46	6.0	6.85	7.23
Range	6.0-9.7	7.2-8.8	8.0-9.0	9.3-10.3	9.8-11.9	11.8-13.0	5.4-6.7	6.0-7.7	6.3-8.5
28	9.34	9.67	8.55	9.18	9.48	8.79	11.41	10.77	9.02
Range	8.6-9.8	9.0-10.2	7.6-9.4	8.3-10.4	9-10.4	8-9.8	10.6-12.6	9.2-11.8	8.1-9.6
29	8.55	7.48	8.45	8.79	7.97	8.39	9.02	8.0	8.92
Range	7.6-9.4	7.2-8.0	8.0-8.8	8.0-9.8	7.6-8.2	7.9-8.9	8.1-9.6	7.7-8.2	7.6-9.6
30	8.45	8.77	8.27	8.39	8.93	8.50	8.92	9.04	8.24
Range	8.0-8.8	8.5-8.8	8.0-8.4	7.9-8.9	8.4-9.1	8.2-8.7	7.6-9.6	8.4-9.6	7.6-8.6
31	8.27	8.23	8.52	8.50	8.25	8.37	8.24	7.51	6.67
Range	8.0-8.4	8.0-8.4	8.3-8.6	8.2-8.7	8.0-8.5	8.1-8.5	7.6-8.6	7.0-8.2	5.4-7.2
32	8.23	8.52	8.28	8.25	8.37	8.00	7.51	6.67	1.21
Range	8.0-8.4	8.3-8.6	8.2-8.4	8.0-8.5	8.1-8.5	8.0-8.1	7.0-8.2	5.4-7.2	0.0-5.4
33	8.52	8.28	8.35	8.37	8.0	8.08	6.67	1.21	0
Range	8.3-8.6	8.2-8.4	8.2-8.4	8.1-8.5	8.0-8.1	8.0-8.2	5.4-7.2	0.0-5.4	0-0

Table A12 (continued). DISSOLVED OXYGEN
1974 STORM DATA (MEAN PER DAY)
(mg/l)

Storm No.	Point A			Point B			Point C		
	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3	Day 1	Day 2	Day 3
34	7.55	7.63	7.74	7.53	7.33	7.08	2.06	5.56	5.93
Range	6.4-9.2	6.6-8.6	7.2-9.6	7.4-7.8	7.1-7.8	6.8-7.2	0.0-6.2	4.8-6.0	5.6-6.4
35	7.65	7.63	7.74	7.53	7.33	7.08	2.06	5.56	5.93
Range	6.4-9.2	6.6-8.6	7.2-9.6	7.4-7.8	7.1-7.8	6.8-7.2	0.0-6.2	4.8-6.0	5.6-6.4
36	8.48	9.00	9.41	4.89	6.59	7.62	7.44	6.97	6.76
Range	7.2-9.4	8.3-9.6	9.0-10.0	4.2-6.4	5.9-7.0	6.6-9.1	7.1-8.1	6.7-7.1	6.4-7.6
37	9.00	9.41	7.55	6.59	7.62	7.69	6.97	6.76	6.10
Range	8.3-9.6	9.0-10.0	5.8-9.0	5.9-7.0	6.6-9.1	7.1-8.0	6.7-7.1	6.4-7.6	3.3-7.8
38	7.55	6.54	5.12	7.69	7.62	8.75	6.1	7.0	9.3
Range	5.8-9.0	5.5-8.1	0.0-5.8	7.1-8.0	6.8-8	7.1-18.2	3.3-7.3	5.0-7.3	7.2-11.0
39	5.12	10.66	10.67	8.75	8.57	7.96	9.3	9.54	8.40
Range	0.0-5.8	9.0-11.8	9.8-11.7	7.1-18.2	8.0-8.9	7.6-8.3	7.2-11	8.3-10.9	8.0-8.9
40	10.24	10.63	9.56	7.95	2.05	2.70	7.15	7.03	7.20
Range	8.4-11.2	9.6-11.2	8.8-10.6	1.6-10.4	0.4-4.4	1.8-4.0	7.0-7.4	5.0-9.4	5.6-8.7
41	7.97	7.03	7.68	2.26	0.87	1.63	3.48	4.68	6.29
Range	6.6-8.6	6.4-8.7	6.2-9.4	0.6-4.0	0.0-2.8	0.0-4.0	2.8-4.8	4.0-5.3	4.2-8.8
42	8.46	6.83	6.38	1.74	2.18	4.14	8.34	9.45	12.56
Range	6.4-9.3	5.6-8.6	5.1-7.9	0.8-2.4	1.4-4.6	1.4-10.2	6.4-10.6	7.2-12.2	8.6-17.0
43	3.61	3.74	3.69	5.25	5.72	10.82	10.19	13.53	12.22
Range	3.2-4.3	3.4-4.1	2.5-4.5	2.0-10.4	5.8-12.2	8.2-16.4	8.0-15.0	10.6-17.1	9.1-15.5
44	4.88	4.60	4.66	3.54	3.89	1.30	6.88	6.47	7.84
Range	4.5-5.2	4.3-4.9	4.4-5.0	2.2-4.6	3.0-4.4	0.0-3.0	5.0-9.6	5.2-8.2	5.2-11.2
45	4.12	4.26	-	2.42	1.47	3.11	8.53	7.68	9.47
	3.6-4.9	3.8-4.8	-	1.0-3.6	0.8-2.4	0.8-6.0	6.8-10.2	5.4-11.0	6.7-13.8

Table A13. 1971 DRY WEATHER PERIOD FOR TOTAL SOLIDS
(mg/l)

Monitoring period	Day 1	Day 2	Day 3	Mean[a]
		Point A		
1-3	202	274	327	
4-6	139	326	191	
7-9	286	275	181	
11-13	206	182	181	
14-15	201	174	--	
16-18	208	232	205	
19-21	282	225	190	
				224
		Point B		
1-3	483	569	614	
4-6	303	500	335	
7-9	503	429	382	
11-13	390	344	307	
14-15	469	397	--	
16-18	333	368	293	
19-21	427	435	367	
				412
		Point C		
1-3	764	817	828	
4-6	634	834	837	
7-9	669	635	635	
11-13	809	729	812	
14-15	799	695	--	
16-18	704	744	688	
19-21	--	627	648	
				732

a. Mean of all data points.

Table A14. 1971 WET WEATHER DATA PARAMETER TOTAL SOLIDS
(mg/l)

Storm No.	Point A						
	06 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	142	142	142	142	142	117	177
2	271	207	201	207	222	243	--
3	203	193	138	176	178	195	91
4	255	240	209	247	238	218	383
5	231	239	255	268	248	252	198
6	232	217	216	173	210	232	373
7	218	199	258	278	238	--	--
8	180	158	158	165	165	248	184
9	293	205	202	189	222	214	190
10	235	220	233	221	227	265	275
11	298	392	359	453	376	366	469
12	210	215	189	347	240	338	360
Mean	230	219	205	238	225	244	270

Table A14 (continued). 1971 WET WEATHER DATA PARAMETER TOTAL SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	470	470	470	470	470	441	519
2	538	499	587	647	568	626	--
3	423	--	--	--	423	--	--
4	331	322	333	336	330	336	678
5	419	396	396	356	392	357	273
6	273	452	442	317	371	368	222
7	372	342	355	371	360	--	--
8	258	283	323	332	299	360	354
9	385	415	425	456	420	472	441
10	358	--	370	278	335	447	520
11	427	492	455	481	464	510	489
12	358	395	508	549	452	540	584
Mean	384	406	424	417	407	445	453

Table A14 (continued). 1971 WET WEATHER DATA TOTAL SOLIDS

(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	757	757	605	--
3	650	602	724	658	658	658	739
4	--	--	--	740	740	686	793
5	--	--	--	757	757	935	771
6	--	--	785	--	785	637	638
7	--	704	--	--	704	--	--
8	--	--	--	671	671	686	615
9	--	--	--	--	--	--	--
10	645	--	--	623	634	657	646
11	--	--	--	444	444	678	596
12	--	--	--	724	724	888	845
Mean	647	653	754	687	687	715	705

Table A15. 1973 WET WEATHER DATA TOTAL SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	505	505	488	488	496	562	488
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	--	--	347	347	347	382	522
6	611	611	511	511	561	521	436
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	387	286	304	490	367	377	424
13	224	214	210	221	217	197	230
14	268	326	320	295	302	389	354
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	412	368	277	335	348	289	252
19	278	291	247	273	272	295	468
20	346	376	336	423	370	343	332
21	407	410	403	418	410	365	301
22	460	634	537	580	553	542	554
Mean	389	402	361	398	385	387	396

Table A15 (continued). 1973 WET WEATHER DATA TOTAL SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	520	520	503	503	512	554	565
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	591	591	566	566	578	561	595
6	610	610	462	462	536	500	398
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	598	684	546	571	600	462	688
13	540	498	457	764	565	414	938
14	--	629	685	684	666	672	496
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	704	672	709	692	694	605	562
19	697	707	721	718	711	707	738
20	--	--	--	--	--	502	509
21	690	721	682	654	687	576	762
22	691	527	533	591	586	585	593
Mean	626	615	586	620	613	558	622

Table A15 (continued). 1973 WET WEATHER DATA TOTAL SOLIDS
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	522	522	486	486	504	526	490
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	571	571	576	576	574	622	553
6	531	531	567	567	549	527	396
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	769	718	791	683	740	768	694
13	733	786	688	672	720	764	402
14	--	--	--	--	--	757	788
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	915	816	789	765	821	758	795
19	813	792	793	784	796	777	775
20	534	498	494	493	505	630	641
21	675	701	686	678	685	668	640
22	680	682	852	710	731	602	626
Mean	674	661	672	641	662	672	618

Table A16. 1974 WET WEATHER DATA TOTAL SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	594	--	--	--	--	--	--
24	507	--	--	--	--	--	--
25	522	502	498	483	501	514	512
26	639	586	533	618	594	557	556
27	422	452	398	585	462	618	555
28	587	533	602	595	579	506	443
29	--	--	--	--	--	--	--
30	483	511	532	504	508	530	600
31	554	526	510	531	530	600	653
32	599	625	612	775	653	847	--
33	612	775	1043	958	847	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	417	357	290	308	343	--	423
37	417	357	290	308	343	--	423
38	423	423	423	423	423	422	517
39	502	463	543	411	480	289	230
40	189	397	348	196	283	309	295
41	407	289	262	333	323	453	249
42	258	--	--	--	--	341	--
43	277	244	213	266	250	223	243
44	488	420	413	381	426	362	487
45	374	379	280	374	352	289	302
Mean	464	461	458	473	465	457	432

Table A16 (Continued). 1974 WET WEATHER DATA TOTAL SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	574	--	--	--	--	--	--
24	800	--	--	--	--	--	--
25	491	487	506	522	502	490	504
26	642	687	683	662	669	637	589
27	608	584	606	624	606	627	608
28	555	614	599	557	481	600	595
29	--	--	--	--	--	--	--
30	493	536	540	526	524	527	609
31	534	511	520	542	527	609	839
32	671	668	787	1229	839	1024	--
33	787	1229	1110	971	1024	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	667	664	563	627	630	692	598
37	667	664	563	627	630	692	598
38	--	--	--	--	598	699	584
39	555	540	578	531	549	668	595
40	--	--	--	--	--	568	532
41	470	410	482	499	465	417	617
42	301	--	--	--	--	721	723
43	546	597	620	579	586	563	622
44	552	561	456	503	518	444	623
45	631	594	612	664	625	594	555
Mean	614	623	618	655	617	624	612

Table A16 (Continued). 1974 WET WEATHER DATA TOTAL SOLIDS
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	40-72 hours
23	552	--	--	--	--	--	--
24	470	--	--	--	--	--	--
25	--	--	--	--	--	511	563
26	--	--	--	--	--	729	610
27	610	608	611	597	607	586	575
28	581	565	570	559	569	596	638
29	--	--	--	--	--	--	--
30	500	499	508	512	505	541	585
31	527	526	564	547	541	585	793
32	608	777	714	1072	793	866	--
33	714	1072	839	839	866	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	668	645	721	695	682	695	769
37	645	645	721	695	682	695	769
38	769	769	769	769	769	700	536
39	493	485	514	550	511	--	--
40	759	686	733	690	717	749	873
41	704	708	703	732	712	711	808
42	556	537	540	521	539	552	549
43	831	772	761	786	788	789	772
44	876	806	783	793	812	759	888
45	845	797	722	788	788	704	674
Mean	651	681	673	697	680	673	693

Table A17. 1971 DRY WEATHER PERIOD FOR SUSPENDED SOLIDS
(mg/l)

Monitoring period	Day 1	Day 2	Day 3	Mean[a]
		Point A		
1-3	10	13	18	
4-6	1	9	4	
7-9	11	25	11	
11-13	16	11	6	
14-15	6	5	--	
16-18	10	16	5	
19-21	27	12	9	
				11
		Point B		
1-3	9	13	25	
4-6	6	18	20	
7-9	26	41	51	
11-13	33	61	22	
14-15	28	7	--	
16-18	11	12	20	
19-21	14	62	30	
				26
		Point C		
1-3	64	65	67	
4-6	25	47	62	
7-9	86	69	55	
11-13	57	77	68	
14-15	51	16	--	
16-18	92	101	63	
19-21	--	19	85	
				62

a. Mean of all data points.

Table A18. 1971 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	28	28	28	28	28	25	15
2	26	3	2	3	8	9	--
3	6	7	1	2	4	9	8
4	6	5	5	9	6	18	11
5	4	4	6	6	5	7	24
6	9	3	0	5	4	17	39
7	17	20	12	14	16	--	--
8	29	11	7	8	14	49	25
9	28	25	9	9	18	17	24
10	19	8	19	11	14	18	32
11	12	16	14	18	15	14	54
12	11	10	12	15	12	30	30
Mean	16	11	9	10	12	19	26

Table A18 (continued). 1971 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	16	16	16	16	16	22	15
2	98	39	32	34	51	21	--
3	17	--	--	--	17	--	--
4	25	21	29	41	29	39	49
5	46	38	36	23	36	41	17
6	76	95	87	34	73	32	13
7	94	85	12	16	52	--	--
8	24	32	11	13	20	39	22
9	33	43	16	17	27	18	47
10	23	--	44	35	34	27	80
11	13	19	26	40	24	46	107
12	12	26	84	56	59	36	33
Mean	39	41	35	29	38	32	42

Table A18 (continued). 1971 STORM DATA FOR SUSPENDED SOLIDS (mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	30	30	26	--
3	32	58	50	62	50	105	70
4	--	--	--	80	80	63	64
5	--	--	--	21	21	42	73
6	--	--	33	--	33	47	17
7	--	112	--	--	112	--	--
8	--	--	--	86	86	128	74
9	--	--	--	--	--	--	--
10	62	--	--	77	70	52	11
11	--	--	--	38	38	134	35
12	--	--	--	68	68	62	61
Mean	47	85	41	57	58	73	50

Table A19. 1973 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	162	162	155	155	158	91	57
3	65	65	65	65	65	--	--
4	30	30	30	30	30	30	--
5	--	--	10	10	10	18	28
6	39	39	42	42	40	77	34
7	--	--	--	--	--	31	19
8	20	20	20	20	20	--	--
9	78	78	78	78	78	44	86
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	30	22	37	76	41	73	61
13	12	13	10	21	14	24	17
14	20	35	37	26	30	98	40
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	29	29	19	36	27	10	8
19	9	11	8	15	11	14	15
20	17	14	12	22	16	10	7
21	22	40	47	68	44	35	21
22	46	46	48	138	70	115	121
Mean	41	43	41	53	43	47	39

Table A19 (continued). 1973 STORM DATA FOR SUSPENDED SOLIDS (mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	44	44	44	44	44	61	--
2	167	167	190	190	178	72	154
3	66	66	66	66	66	--	--
4	65	65	65	65	65	55	--
5	42	42	52	52	47	35	14
6	37	37	33	33	35	48	44
7	5	5	5	5	5	122	78
8	176	176	176	176	176	--	--
9	150	150	150	150	150	153	171
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	122	180	152	162	154	76	99
13	118	105	47	343	153	43	47
14	--	31	31	34	32	34	25
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	50	48	53	45	49	29	34
19	33	26	23	33	29	19	22
20	--	--	--	--	--	10	16
21	78	56	55	57	62	30	39
22	34	57	83	129	76	130	164
Mean	79	78	76	105	82	61	69

Table A19 (continued). 1973 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	62	62	62	62	62	81	--
2	136	136	158	158	147	102	65
3	22	22	22	22	22	--	--
4	25	25	25	25	25	36	--
5	26	26	18	18	22	20	20
6	36	36	35	35	36	116	62
7	--	--	--	--	--	--	28
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	107	66	68	93	84	120	106
13	84	82	43	36	61	59	223
14	--	--	--	--	--	56	48
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	153	65	39	54	78	41	77
19	29	31	31	56	37	24	20
20	30	27	34	35	32	30	19
21	22	33	31	31	29	24	37
22	76	163	403	267	227	150	221
Mean	62	59	74	68	66	66	74

Table A20. 1974 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	114	--	--	--	--	--	--
24	65	--	--	--	--	--	--
25	111	82	89	79	90	68	56
26	185	253	232	426	274	183	144
27	45	59	62	134	75	77	56
28	67	80	79	85	78	45	37
29	--	--	--	--	--	--	--
30	126	140	172	127	141	88	117
31	75	92	83	103	88	117	141
32	142	189	204	381	229	141	
33	204	381	700	641	482	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	33	31	37	37	35	--	47
37	33	31	37	37	35	--	47
38	47	47	47	47	47	133	216
39	136	132	128	120	129	51	57
40	15	17	17	16	16	23	15
41	28	22	23	62	34	22	30
42	17	--	--	--	--	46	NS
43	66	29	48	50	35	41	23
44	85	22	27	18	38	16	7
45	24	24	20	26	24	14	8
Mean	81	96	118	140	109	71	67

Table A20 (continued). 1974 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	60	--	--	--	--	--	--
24	125	--	--	--	--	--	--
25	69	64	77	73	71	47	51
26	222	234	255	211	231	220	150
27	92	72	74	57	74	43	63
28	58	73	77	49	64	81	60
29	--	--	--	--	--	--	--
30	154	166	150	117	147	84	114
31	68	67	102	98	84	114	514
32	236	483	447	889	514	704	--
33	447	889	794	687	704	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	122	131	107	129	122	102	153
37	122	131	107	129	122	102	153
38	--	--	--	--	153	350	257
39	163	145	153	131	148	154	--
40	114	NS	NS	NS	--	61	37
41	60	46	77	104	72	39	29
42	80	--	--	--	--	95	86
43	39	28	27	23	29	40	58
44	43	52	22	22	35	34	65
45	60	44	78	90	68	91	37
Mean	123	175	170	187	165	144	122

Table A20 (continued). 1974 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	51	--	--	--	--	--	--
24	75	--	--	--	--	--	--
25	--	--	--	--	--	64	93
26	--	--	--	--	--	297	165
27	62	76	104	84	82	52	53
28	43	36	43	48	43	58	54
29	--	--	--	--	--	--	--
30	125	107	93	77	101	79	112
31	73	77	79	87	79	112	441
32	202	398	378	784	441	562	--
33	378	784	542	542	562	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	139	111	123	124	124	145	309
37	139	111	123	124	124	145	309
38	--	--	--	--	309	332	172
39	89	78	82	90	85	--	--
40	98	91	116	56	90	112	177
41	132	130	136	148	137	124	123
42	76	61	49	44	58	36	38
43	123	110	110	109	113	111	121
44	105	130	68	64	92	83	70
45	96	108	78	96	95	77	108
Mean	118	161	142	165	158	149	156

Table A21. 1971 DRY WEATHER PERIOD DISSOLVED SOLIDS
(mg/l)

Monitoring period	Day 1	Day 2	Day 3	Mean[a]
		Point A		
1-3	192	261	309	
4-6	138	317	187	
7-9	275	250	170	
11-13	190	171	175	
14-15	195	169	--	
16-18	198	216	200	
19-21	255	213	181	
				11
		Point B		
1-3	474	556	589	
4-6	297	482	315	
7-9	480	388	331	
11-13	357	283	285	
14-15	441	396	--	
16-18	322	356	273	
19-21	413	373	337	
				387
		Point C		
1-3	700	752	761	
4-6	609	787	1775	
7-9	583	566	580	
11-13	752	652	744	
14-15	748	679	--	
16-18	612	643	625	
19-21	--	608	563	
				671

a. Mean of all data points.

Table A22. 1971 STORM DATA FOR DISSOLVED SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	114	114	114	114	114	92	162
2	245	204	199	204	214	234	--
3	197	186	208	174	174	186	83
4	249	235	204	238	232	200	372
5	227	235	249	262	243	245	174
6	223	214	216	168	206	215	334
7	201	179	246	264	222	--	--
8	151	147	151	157	151	199	159
9	265	180	193	180	204	197	166
10	216	212	214	210	213	247	243
11	286	374	345	435	361	352	415
12	199	205	177	332	228	308	330
Mean	214	207	209	228	213	225	243

Table A22 (continued). 1971 STORM DATA FOR DISSOLVED SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	454	454	454	454	454	421	504
2	440	468	555	613	517	605	--
3	406	--	--	--	406	--	--
4	306	301	304	295	301	297	629
5	373	358	360	333	356	316	256
6	197	357	355	283	298	336	209
7	278	257	343	355	308	--	--
8	234	251	312	319	279	321	332
9	352	372	409	439	393	454	394
10	335	--	326	243	301	420	440
11	414	473	429	441	440	464	382
12	346	369	424	493	393	504	551
Mean	344	365	388	380	370	413	410

Table A22 (continued). 1971 STORM DATA FOR DISSOLVED SOLIDS (mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	727	727	579	--
3	618	544	674	596	608	553	669
4	--	--	--	660	660	623	729
5	--	--	--	736	736	893	698
6	--	--	725	--	725	590	621
7	--	592	--	--	592	--	--
8	--	--	--	585	585	558	541
9	--	--	--	--	--	--	--
10	583	--	--	546	564	505	635
11	--	--	--	406	406	544	561
12	--	--	--	656	656	826	784
Mean	601	568	633	614	625	630	654

Table A23. 1973 STORM DATA FOR DISSOLVED SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	343	343	333	333	338	471	431
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	--	--	337	337	337	364	494
6	572	572	469	469	521	444	402
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	357	264	267	414	326	304	363
13	212	201	200	200	203	173	213
14	248	291	283	269	272	291	314
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	383	339	258	299	321	279	244
19	269	280	239	258	261	281	453
20	329	362	324	401	354	333	325
21	385	370	356	350	366	330	280
22	414	588	489	442	483	427	433
Mean	351	361	323	342	343	336	359

Table A23 (continued). 1973 STORM DATA FOR DISSOLVED SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	353	353	313	313	334	482	411
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	549	549	514	514	531	526	581
6	573	573	429	429	501	452	354
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	476	504	394	409	446	386	589
13	422	393	410	421	412	371	891
14	--	598	654	656	634	638	471
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	654	624	656	647	645	576	528
19	664	681	698	685	682	688	716
20	--	--	--	--	--	492	493
21	612	665	627	597	625	546	723
22	657	470	456	508	510	455	429
Mean	551	541	514	517	532	510	562

Table A23(continued). 1973 STORM DATA FOR DISSOLVED SOLIDS
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	386	386	328	328	357	424	425
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	545	545	560	560	552	602	533
6	495	495	532	532	513	411	334
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	662	672	723	596	656	648	588
13	649	704	645	636	659	705	179
14	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	762	751	750	711	743	717	718
19	784	761	762	728	759	753	755
20	504	471	460	458	473	600	622
21	653	668	655	678	656	644	603
22	604	519	449	443	504	452	405
Mean	604	597	586	566	587	605	536

Table A24. 1974 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	480	--	--	--	--	--	--
24	442	--	--	--	--	--	--
25	411	420	409	407	411	446	456
26	454	331	301	192	320	375	412
27	377	393	336	451	387	541	499
28	520	453	523	510	501	461	406
29	--	--	--	--	--	--	--
30	357	371	360	377	367	442	483
31	479	434	527	428	442	483	424
32	457	436	408	394	424	706	--
33	408	394	343	317	365	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	384	326	253	271	308	--	376
37	384	326	253	271	308	--	376
38	376	376	376	376	376	289	301
39	366	331	415	291	351	238	173
40	174	380	331	180	267	286	280
41	379	267	239	271	289	431	219
42	241	--	--	--	--	295	--
43	211	215	165	216	215	182	220
44	403	398	386	363	388	346	480
45	350	355	260	348	328	275	294
Mean	383	365	346	333	356	386	360

Table A24 (continued). 1974 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	514	--	--	--	--	--	--
24	675	--	--	--	--	--	--
25	422	423	429	449	431	443	453
26	420	453	428	451	438	417	439
27	516	512	532	567	532	584	545
28	497	541	522	508	517	519	535
29	--	--	--	--	--	--	--
30	339	360	390	409	377	443	495
31	466	444	418	444	443	495	325
32	435	185	340	340	325	320	--
33	340	340	316	284	320	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	545	533	456	498	508	590	445
37	545	533	456	498	508	590	445
38	--	--	--	--	445	349	327
39	392	395	385	400	401	514	--
40	--	--	--	--	--	507	498
41	410	364	405	335	393	378	588
42	726	--	--	--	--	626	637
43	507	569	593	556	557	523	564
44	509	434	481	483	483	410	558
45	571	550	534	574	557	503	518
Mean	490	447	442	453	452	483	491

Table A24 (continued). 1974 STORM DATA FOR SUSPENDED SOLIDS
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	501	--	--	--	--	--	--
24	395	--	--	--	--	--	--
25	--	--	--	--	--	447	470
26	--	--	--	--	--	432	445
27	548	532	507	513	525	534	522
28	538	529	527	511	526	538	584
29	--	--	--	--	--	--	--
30	375	392	415	435	404	462	473
31	454	449	485	460	462	473	352
32	406	379	336	288	352	304	--
33	336	288	297	297	304	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	529	534	598	571	558	550	460
37	529	534	598	571	558	550	460
38	--	--	--	--	460	368	364
39	404	407	432	460	426	--	--
40	661	595	617	634	627	637	696
41	571	578	567	584	575	587	685
42	480	476	491	477	481	516	511
43	708	662	651	677	675	678	651
44	762	676	715	729	720	676	818
45	749	689	644	692	693	627	566
Mean	526	514	525	527	522	524	537

Table A25. 1971 DRY WEATHER PERIOD FOR ORTHO PHOSPHATE
(mg/l)

Monitoring period	Day 1	Day 2	Day 3	Mean[a]
		Point A		
1-3	0.05	0.05	0.06	
4-6	0.01	0.00	0.00	
7-9	0.00	0.00	0.00	
11-13	0.00	0.00	0.00	
14-15	0.00	0.00	--	
16-18	0.01	0.00	0.01	
19-21	0.14	0.07	0.07	
				0.02
		Point B		
1-3	0.37	0.33	0.32	
4-6	0.12	0.17	0.14	
7-9	0.18	0.14	0.07	
11-13	0.02	0.03	0.03	
14-15	0.05	0.04	--	
16-18	0.03	0.02	0.02	
19-21	0.43	0.36	0.32	
				0.16
		Point C		
1-3	0.15	0.16	0.10	
4-6	0.14	0.12	0.12	
7-9	0.13	0.16	0.12	
11-13	0.10	0.10	0.20	
14-15	0.16	0.30	--	
16-18	0.18	0.22	0.20	
19-21	--	0.63	0.46	0.20

a. Mean of all data points.

Table A26. 1971 STORM DATA FOR ORTHO PHOSPHATE
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	0.02	0.02	0.02	0.02	0.02	<0.01	<0.01
2	0.01	0.00	0.00	0.00	0.00	0.00	0.00
3	0.01	0.02	0.00	0.00	0.01	0.01	0.00
4	0.25	0.00	0.05	0.00	0.08	0.00	0.00
5	0.01	0.00	0.00	0.00	0.00	0.00	0.01
6	0.01	0.01	0.00	0.00	0.00	0.00	0.10
7	0.05	0.03	0.02	0.00	0.02	--	--
8	0.04	0.06	0.02	0.02	0.04	0.03	0.03
9	0.07	0.06	0.05	0.08	0.05	0.03	0.02
10	0.13	0.02	0.01	0.01	0.04	0.01	0.01
11	0.04	0.04	0.05	0.05	0.08	0.08	0.08
12	0.08	0.09	0.08	0.08	0.08	0.08	0.08
Mean	0.06	0.03	0.03	0.02	0.03	0.02	0.03

Table A26 (continued). 1971 STORM DATA FOR ORTHO PHOSPHATE
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	0.11	0.11	0.11	0.11	0.11	0.13	0.16
2	0.06	0.08	0.11	0.11	0.09	0.22	--
3	0.02	--	--	--	0.02	--	--
4	0.00	0.00	0.00	0.02	0.00	0.03	0.03
5	0.05	0.03	0.06	0.05	0.05	0.06	0.07
6	0.00	0.03	0.02	0.03	0.02	0.05	0.00
7	0.04	0.03	0.03	0.02	0.03	--	--
8	0.04	0.04	0.05	0.05	0.04	0.05	0.05
9	0.08	0.10	0.08	0.09	0.09	0.13	0.12
10	0.04	--	0.04	0.04	0.04	0.03	0.07
11	0.07	0.08	0.15	0.10	0.10	0.12	0.22
12	0.26	0.24	0.22	0.23	0.24	0.22	0.20
Mean	0.06	0.07	0.08	0.08	0.07	0.10	0.10

Table A26 (continued). 1971 STORM DATA FOR ORTHO PHOSPHATE
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	0.20	0.20	0.30	--
3	0.10	0.13	0.11	0.12	0.12	0.16	0.07
4	--	--	--	0.10	0.10	0.14	0.09
5	--	--	--	0.15	0.15	0.10	0.10
6	--	--	0.20	--	0.20	0.22	0.28
7	--	0.17	--	--	0.17	--	--
8	--	--	--	0.17	0.17	0.15	0.21
9	--	--	--	--	--	--	--
10	0.15	--	--	0.10	0.12	0.10	0.13
11	--	--	--	0.23	0.23	0.36	0.64
12	--	--	--	0.32	0.32	.32	0.33
Mean	0.13	0.15	0.16	0.17	0.16	0.21	0.23

Table A27. 1973 STORM DATA FOR TOTAL PHOSPHATE
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	0.37	0.37	0.33	0.33	0.35	0.28	0.44
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	--	--	0.16	0.16	0.16	0.20	0.45
6	0.24	0.24	0.02	0.02	0.13	0.24	0.22
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	0.35	0.18	0.18	0.36	0.27	0.37	0.46
13	0.13	0.08	0.06	0.08	0.09	0.10	0.09
14	1.73	0.30	0.16	0.16	0.59	0.45	0.27
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	2.65	0.11	0.06	1.45	1.07	1.00	0.05
19	0.06	0.04	0.03	0.04	0.04	0.08	0.10
20	0.33	0.10	0.06	0.12	0.15	0.16	0.13
21	0.19	0.22	0.33	0.38	0.28	0.32	0.14
22	0.20	0.34	0.19	0.39	0.28	0.35	0.46
Mean	0.63	0.20	0.14	0.32	0.31	0.32	0.26

Table A27 (continued). 1973 STORM DATA FOR TOTAL PHOSPHATE
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	0.38	0.38	0.31	0.31	0.34	0.20	0.28
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	0.24	0.24	0.30	0.30	0.27	0.26	0.29
6	0.26	0.26	<0.01	<0.01	<0.14	0.30	0.19
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	0.39	0.46	0.44	0.48	0.44	--	0.45
13	0.51	0.44	0.25	0.75	0.49	0.22	0.27
14	--	0.39	0.32	0.33	0.35	0.29	0.27
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	0.29	0.25	0.25	0.22	0.25	0.23	0.19
19	0.19	0.20	0.21	0.21	0.20	0.16	0.18
20	--	--	--	--	--	0.24	0.22
21	0.31	0.31	0.32	0.33	0.32	0.25	0.43
22	0.24	0.24	0.27	0.37	0.28	0.44	0.42
Mean	0.31	0.32	0.27	0.33	0.31	0.26	0.29

Table A27 (continued). 1973 STORM DATA FOR TOTAL PHOSPHATE
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	0.31	0.31	0.32	0.32	0.32	0.24	0.96
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	0.29	0.29	0.23	0.23	0.26	0.31	0.24
6	0.49	0.49	0.13	0.13	0.31	0.27	0.22
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	0.39	0.30	0.32	0.37	0.34	0.48	0.43
13	0.48	0.75	0.33	0.32	0.47	0.38	0.60
14	--	--	--	--	--	--	0.44
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	0.47	0.31	0.31	0.25	0.34	0.24	0.29
19	0.20	0.19	0.23	0.22	0.21	0.21	0.22
20	0.18	0.23	0.24	0.27	0.23	0.20	0.29
21	0.30	0.27	0.29	0.26	0.28	0.30	0.46
22	0.28	0.44	0.71	0.58	0.50	0.48	0.53
Mean	0.34	0.36	0.31	0.30	0.33	0.33	0.43

Table A28. 1974 STORM DATA FOR TOTAL PHOSPHATE

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	0.34	--	--	--	--	--	--
24	0.20	--	--	--	--	--	--
25	0.31	0.26	0.21	0.22	0.25	0.25	0.50
26	0.26	0.23	0.26	0.36	0.28	0.25	0.23
27	0.14	0.18	0.21	0.20	0.18	0.40	0.22
28	0.25	0.23	0.25	0.27	0.25	0.17	0.16
29	--	--	--	--	--	--	--
30	0.33	0.33	0.38	0.32	0.34	0.26	0.31
31	0.26	0.26	0.24	0.27	0.26	0.31	0.43
32	0.32	0.40	0.40	0.58	0.43	0.68	--
33	0.40	0.58	0.89	0.87	0.68	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	1.19	0.14	0.11	0.10	0.14	--	0.17
37	1.19	0.14	0.11	0.10	0.14	--	0.17
38	--	--	--	--	0.17	0.32	0.35
39	0.29	0.33	0.29	0.20	0.28	0.21	0.29
40	0.08	0.07	0.07	0.07	0.07	0.08	0.02
41	0.09	0.06	0.05	0.16	0.09	0.11	0.09
42	0.13	--	--	--	--	0.28	--
43	0.22	0.16	0.19	0.18	0.19	0.11	0.11
44	0.12	0.03	0.05	0.05	0.06	0.06	--
45	0.12	0.13	0.03	0.05	0.08	0.07	0.05
Mean	0.33	0.22	0.23	0.25	0.25	0.23	0.22

Table A28 (continued). 1974 STORM DATA FOR TOTAL PHOSPHATE

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	0.19	--	--	--	--	--	--
24	0.23	--	--	--	--	--	--
25	0.20	0.20	0.21	0.23	0.21	0.23	0.18
26	0.34	0.42	0.45	0.43	0.41	0.34	0.25
27	0.27	0.26	0.25	0.28	0.26	0.27	0.26
28	0.21	0.20	0.24	0.21	0.22	0.21	0.22
29	--	--	--	--	--	--	--
30	0.34	0.34	0.30	0.26	0.31	0.24	0.29
31	0.24	0.22	0.25	0.26	0.24	0.29	0.53
32	0.41	0.59	0.59	1.03	0.53	0.87	--
33	0.59	1.03	0.96	0.90	0.87	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	0.37	0.33	0.32	0.31	0.33	0.29	0.28
37	0.37	0.33	0.32	0.31	0.33	0.29	0.28
38	--	--	--	--	0.28	0.45	0.42
39	0.43	0.32	0.32	0.29	0.34	0.31	0.30
40	0.23	--	--	--	--	0.21	0.20
41	0.19	0.23	0.23	0.19	0.21	0.25	0.19
42	0.41	--	--	--	--	0.54	0.32
43	0.13	0.15	0.13	0.15	0.14	0.16	0.17
44	0.20	0.20	0.16	0.18	0.18	0.19	--
45	0.27	0.29	0.32	0.34	0.30	0.26	0.23
Mean	0.29	0.34	0.34	0.36	0.32	0.32	0.27

Table A28 (continued). 1974 STORM DATA FOR TOTAL PHOSPHATE

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	0.17	--	--	--	--	--	--
24	0.20	--	--	--	--	--	--
25	--	--	--	--	--	0.82	0.65
26	--	--	--	--	--	0.45	0.21
27	0.23	0.20	0.29	0.23	0.24	0.24	0.23
28	0.20	0.19	0.17	0.19	0.19	0.22	0.23
29	--	--	--	--	--	--	--
30	0.27	0.29	0.24	0.22	0.26	0.24	0.28
31	0.24	0.24	0.23	0.24	0.24	0.28	0.59
32	0.34	0.52	0.54	0.95	0.59	0.76	--
33	0.54	0.95	0.76	0.70	0.76	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	0.23	0.23	0.30	0.24	0.25	0.23	0.39
37	0.23	0.23	0.30	0.24	0.25	0.23	0.39
38	--	--	--	--	0.39	0.52	0.38
39	0.28	0.24	0.24	0.26	0.25	--	--
40	0.28	0.24	0.23	0.20	0.24	0.33	0.32
41	0.33	0.31	0.31	0.31	0.32	0.34	0.32
42	0.45	0.44	0.41	0.39	0.42	0.38	0.43
43	0.19	0.18	0.16	0.21	0.18	0.19	0.32
44	0.26	0.29	0.23	0.27	0.26	0.29	--
45	--	0.35	0.25	--	0.30	0.27	0.38
Mean	0.28	0.33	0.31	0.32	0.32	0.36	0.37

Table A29. 1971 DRY WEATHER PERIOD FOR pH
(mg/l)

Monitoring period	Day 1	Day 2	Day 3	Mean[a]
		Point A		
1-3	8.50	8.10	8.05	
4-6	8.10	--	8.00	
7-9	7.80	8.10	7.80	
11-13	7.90	8.10	8.20	
14-15	--	7.70	--	
16-18	7.90	7.80	8.20	
19-21	7.95	8.70	8.10	
				8.06
		Point B		
1-3	8.40	8.20	8.10	
4-6	8.10	--	8.20	
7-9	7.80	7.80	7.90	
11-13	7.50	8.00	7.85	
14-15	--	7.85	--	
16-18	7.90	7.80	8.15	
19-21	7.90	7.95	7.90	
				7.96
		Point C		
1-3	8.45	8.25	8.25	
4-6	8.00	--	8.20	
7-9	7.70	7.80	7.90	
11-13	8.10	8.30	8.30	
14-15	--	7.90	--	
16-18	8.05	8.05	8.00	
19-21	--	8.10	8.00	
				8.08

a. Mean of all data points.

Table A30. 1971 STORM DATA

PARAMETER: pH

Point A

Storm Number	Hours 0-6	7-12	13-18	19-24	Hours 0-24	25-48	49-72
1	7.80	7.80	7.80	7.80	7.80	8.40	8.10
2	7.85	8.30	8.30	8.10	8.07	8.20	--
3	7.90	7.90	6.65	7.80	7.56	7.70	7.80
4	7.70	7.90	7.90	8.00	7.88	8.00	8.10
5	7.70	7.50	7.90	7.80	7.73	7.55	7.90
6	--	--	--	7.55	7.55	7.80	7.80
7	7.80	7.90	8.00	8.10	7.95	--	--
8	8.00	8.00	8.00	8.00	8.00	7.90	8.00
9	7.95	7.90	8.00	7.95	7.95	7.90	8.00
10	8.05	7.90	8.05	8.05	8.01	8.25	8.00
11	7.80	7.80	7.80	7.80	7.80	7.70	8.10
12	7.50	7.70	7.70	7.95	7.71	8.00	7.65
Mean	7.82	7.87	7.83	7.91	7.86	7.95	7.95

Table A30 (continued). 1971 STORM DATA

PARAMETER: pH

POINT B

Storm Number	Hours 0-6	7-12	13-18	19-24	Hours 0-24	25-48	49-72
1	7.80	7.80	7.80	7.80	7.80	8.20	8.20
2	8.25	8.20	8.25	8.15	8.21	8.45	--
3	7.75	--	--	--	7.75	--	--
4	7.80	8.00	7.90	7.90	7.90	7.90	8.10
5	7.55	7.90	7.75	7.80	7.75	7.70	7.70
6	--	--	--	7.90	7.90	7.75	7.55
7	7.90	7.90	7.90	7.95	7.91	--	--
8	8.20	8.20	8.10	8.00	8.13	8.10	8.20
9	8.20	8.20	8.20	8.20	8.20	8.20	8.20
10	8.05	--	8.05	8.45	8.18	8.25	8.05
11	8.00	7.90	7.70	7.70	7.85	8.20	8.20
12	7.70	7.66	8.00	8.10	7.85	7.95	7.90
Mean	7.93	7.97	7.97	8.01	7.97	8.07	8.01

Table A30 (continued). 1971 STORM DATA

PARAMETER: pH

POINT C

Storm Number	Hours				Hours		
	0-6	7-12	13-18	19-24	0-24	25-48	49-72
1	--	--	--	--	--	--	--
2	--	--	--	8.20	--	8.35	--
3	8.05	7.95	7.95	8.10		8.10	8.30
4	--	--	--	7.90	--	8.10	7.00
5	--	--	--	8.10	--	8.25	8.30
6	--	--	--	8.20	--	--	8.10
7	--	--	8.50	--	--	--	--
8	--	--	--	8.30	--	8.30	8.30
9	--	--	--	--	--	--	--
10	8.50	--	--	8.35	--	8.45	8.40
11	--	--	--	7.90	--	8.40	8.30
12	--	--	--	7.90	--	8.20	8.20
Mean	--	--	--	8.10	--	8.20	8.11

Table A31. 1973 STORM DATA

PARAMETER: pH

POINT B

Storm Number	Hours 0-6	7-12	13-18	19-24	Hours 0-24	25-48	49-72
1	--	--	--	--	--	--	--
2	8.00	8.00	8.00	8.00	8.00	8.20	7.80
3	7.90	7.90	7.90	7.90	7.90	--	--
4	8.20	8.20	8.20	8.20	8.20	8.20	--
5	--	--	8.05	8.05	8.05	8.10	7.75
6	8.15	8.15	8.10	8.10	8.13	8.02	7.95
7	--	--	--	--	--	7.90	7.60
8	7.80	7.80	7.80	7.80	7.80	--	--
9	7.80	7.80	7.80	7.80	7.80	7.90	7.80
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	7.95	8.00	7.95	8.05	7.99	7.40	7.60
13	8.03	8.01	8.13	8.15	8.08	8.18	7.90
14	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	7.90	8.00	8.10	7.40	7.85	7.90	7.90
19	8.20	8.35	8.35	8.30	8.30	8.30	8.32
20	8.00	8.30	8.25	8.30	8.23	8.30	8.20
21	8.00	8.00	8.05	8.00	8.01	8.00	8.15
22	8.25	8.29	8.20	8.20	8.24	7.90	8.00
Mean	8.01	8.06	8.06	8.02	8.04	8.02	7.91

Table A31 (continued). POINT B

Storm Number	Hours 0-6	7-12	13-18	19-24	Hours 0-24	25-48	49-72
1	8.10	8.10	8.10	8.10	8.10	8.00	--
2	8.00	8.00	8.00	8.00	8.00	8.20	7.80
3	8.00	8.00	8.00	8.00	8.00	--	--
4	8.15	8.15	8.15	8.15	8.15	8.20	--
5	8.30	8.30	8.20	8.20	8.25	8.25	8.25
6	8.15	8.15	8.05	8.08	8.10	8.00	8.00
7	7.92	7.92	7.92	7.92	7.92	7.80	7.90
8	7.95	7.95	7.95	7.95	7.95	--	--
9	8.00	8.00	8.00	8.00	8.00	7.90	7.90
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	8.15	8.20	7.95	7.90	8.05	7.70	7.20
13	7.93	7.99	8.00	7.98	7.95	7.95	7.70
14	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	8.10	8.10	8.15	8.00	8.09	8.05	8.00
19	8.65	8.70	8.65	8.70	8.68	8.52	8.60
20	--	--	--	--	--	8.30	8.25
21	8.20	8.10	8.10	8.20	8.15	8.10	8.35
22	8.31	8.20	8.15	8.00	8.17	8.05	8.10
Mean	8.13	8.12	8.09	8.07	8.11	8.07	8.00

Table A31 (continued). POINT C

Storm Number	Hours 0-6	7-12	13-18	19-24	Hours 0-24	25-48	49-72
1	8.02	8.02	8.02	8.02	8.02	8.00	--
2	8.10	8.10	7.95	7.95	8.03	8.15	7.85
3	8.20	8.20	8.20	8.20	8.20	--	--
4	8.20	8.20	8.20	8.20	8.20	8.30	--
5	8.30	8.30	8.30	8.30	8.30	8.38	8.30
6	8.20	8.20	8.15	8.15	8.18	8.02	8.05
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	8.25	8.35	8.35	8.35	8.32	8.15	8.20
13	8.40	8.20	8.23	8.40	8.31	8.20	8.10
14	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	8.40	8.33	8.30	8.20	8.31	8.20	8.25
19	8.50	8.50	8.50	8.50	8.50	8.60	8.55
20	8.30	8.23	8.20	8.20	8.28	8.25	8.25
21	8.20	8.10	8.10	8.00	8.13	8.00	8.20
22	8.00	8.12	8.13	8.00	8.06	8.00	8.00
Mean	8.24	8.22	8.20	8.10	8.21	8.19	8.16

Table A32. 1974 STORM DATA

Storm No.	Point A 0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	8.0	--	--	--	--	--	--
24	7.85	--	--	--	--	--	--
25	8.15	8.15	8.20	8.20	8.20	8.15	8.20
26	7.90	8.00	8.00	8.00	8.00	8.15	8.15
27	7.85	8.30	8.30	8.30	8.25	8.25	8.25
28	8.45	8.40	8.40	8.50	8.45	8.40	8.40
29	--	--	--	--	--	--	--
30	8.00	8.20	8.20	8.20	8.15	8.20	8.15
31	8.25	8.05	8.20	8.25	8.20	8.15	--
32	7.65	7.85	--	--	7.75	--	--
33	--	--	--	--	--	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	7.95	8.10	8.20	8.25	8.10	7.95	8.10
37	7.95	8.10	8.20	8.25	8.10	7.95	8.10
38	--	--	--	--	8.10	8.10	7.95
39	8.00	8.10	8.10	8.15	8.10	7.95	7.85
40	8.10	8.10	8.10	8.15	8.10	8.05	8.30
41	7.95	8.10	8.05	8.00	8.05	8.0	7.95
42	7.95	--	--	--	--	7.65	--
43	8.00	7.90	7.95	7.90	7.95	7.75	8.00
44	7.70	7.70	7.75	7.70	7.70	7.50	7.75
45	7.80	7.85	7.90	7.80	7.85	7.45	8.30
Mean	7.97	8.06	8.11	8.12	8.07	7.97	8.10

Table A32 (continued). 1974 STORM DATA

Storm No.	POINT B 0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25 48 hours	49-72 hours
23	8.1	--	--	--	--	--	--
24	8.05	--	--	--	--	--	--
25	8.10	8.15	8.20	8.20	8.15	8.15	8.25
26	7.90	7.95	7.90	7.85	7.90	8.05	8.10
27	8.30	8.30	8.25	8.30	8.30	8.40	8.35
28	8.50	8.50	8.50	8.45	8.50	8.45	8.40
29	--	--	--	--	--	--	--
30	8.15	8.20	8.20	8.20	8.20	8.30	8.20
31	8.30	8.30	8.25	8.25	8.30	8.20	--
32	7.75	7.80	--	--	7.80	--	--
33	--	--	--	--	--	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	8.25	8.20	8.25	8.20	8.20	8.30	8.20
37	8.25	8.20	8.25	8.20	8.20	8.30	8.20
38	--	--	--	--	8.20	8.10	7.85
39	8.00	8.10	8.10	8.05	8.05	8.10	8.10
40	8.20	--	--	--	--	8.10	8.35
41	8.05	8.05	8.0	7.95	8.00	8.0	8.05
42	8.30	--	--	--	--	8.45	8.30
43	8.05	8.05	8.05	8.00	8.05	8.0	8.20
44	8.10	8.20	8.15	8.25	8.20	7.70	7.90
45	7.90	7.85	7.95	7.90	7.90	7.75	8.10
Mean	8.13	8.13	8.16	8.14	8.13	8.15	8.17

Table A32 (continued). 1974 STORM DATA

Storm No.	Point C 0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	8.05	--	--	--	--	--	--
24	8.00	--	--	--	--	--	--
25	--	--	--	--	--	8.20	8.20
26	--	--	--	--	--	8.10	8.15
27	8.35	8.40	8.30	8.30	8.35	8.35	8.30
28	8.45	8.45	8.45	8.40	8.45	8.50	8.40
29	--	--	--	--	--	--	--
30	8.25	8.25	8.20	8.20	8.20	8.20	8.10
31	8.30	8.25	8.20	8.15	8.20	8.10	--
32	7.85	7.85	--	--	7.85	--	--
33	--	--	--	--	--	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	8.30	8.30	8.25	8.25	8.30	8.20	8.20
37	8.30	8.30	8.25	8.25	8.30	8.20	8.20
38	--	--	--	--	8.20	8.10	7.95
39	8.05	8.10	8.10	8.10	8.10	--	--
40	8.25	8.20	8.35	8.35	8.30	8.15	8.35
41	8.30	8.30	8.25	8.20	8.25	8.20	8.15
42	7.65	7.90	7.85	7.85	7.75	8.00	8.05
43	8.40	8.45	8.40	8.40	8.40	8.30	8.15
44	8.40	8.50	8.50	8.60	8.50	8.20	8.20
45	8.15	8.25	8.20	8.20	8.20	8.25	8.50
Mean	8.19	8.25	8.25	8.25	8.22	8.20	8.21

Table A33. 1971 DRY WEATHER DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Monitored period	Day 1	Day 2	Day 3	Mean[a]
		Point A		
1-3	10	17	8	
4-6	12	7	19	
7-9	14	11	12	
11-13	--	--	--	
14-15	8	7	--	
16-18	8	10	9	
19-21	10	9	11	
				11
		Point B		
1-3	20	25	16	
4-6	19	15	18	
7-9	24	17	18	
11-13	--	--	--	
14-15	16	11	--	
16-18	15	11	10	
19-21	14	17	16	
				17
		Point C		
1-3	26	26	17	
4-6	19	16	20	
7-9	22	20	18	
11-13	--	--	--	
14-15	25	24	--	
16-18	26	23	21	
19-21	--	19	31	
				22

a. Mean of all data points.

Table A34. 1971 WET WEATHER DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	9	9	9	9	9	7	7
2	17	9	11	10	12	12	--
3	--	--	--	--	--	--	--
4	7	7	5	7	6	10	7
5	13	9	6	8	9	9	8
6	12	8	8	8	9	12	15
7	11	13	10	12	12	--	--
8	9	8	8	8	8	14	11
9	11	10	11	9	10	10	9
10	8	8	10	7	8	9	7
11	10	12	10	9	10	11	15
12	5	8	4	3	5	5	5
Mean	10	9	8	8	9	10	9

Table A34(continued). 1971 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	16	16	16	16	16	14	16
2	22	21	22	20	21	19	--
3	--	--	--	--	--	--	--
4	14	12	15	12	13	17	19
5	14	13	13	12	13	12	12
6	15	14	14	16	15	13	18
7	18	17	11	12	14	--	--
8	13	20	16	16	16	17	19
9	19	18	16	17	18	15	17
10	10	--	14	12	12	13	17
11	13	14	16	15	14	17	16
12	7	5	10	4	6	7	7
Mean	15	15	15	14	14	14	16

Table A34(continued). 1971 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	20	20	18	--
3	--	--	--	--	--	--	--
4	--	--	--	24	24	24	22
5	--	--	--	20	20	13	13
6	--	--	27	--	27	18	23
7	--	28	--	--	28	--	--
8	--	--	--	21	26	29	23
9	--	--	--	--	--	--	--
10	15	--	--	19	17	20	20
11	--	--	--	14	14	20	20
12	--	--	--	5	5	6	11
Mean	15	28	27	18	20	19	19

Table A35. 1973 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	17	17	18	18	18	12	16
3	16	16	16	16	16	--	--
4	21	21	21	21	21	--	--
5	--	--	10	10	10	9	13
6	12	12	13	13	12	16	11
7	--	--	--	--	--	20	13
8	8	8	8	8	8	--	--
9	12	12	12	12	12	9	10
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	16	14	16	18	16	11	22
13	4	4	5	7	5	5	13
14	12	11	11	10	11	15	15
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	12	12	9	10	11	5	9
19	3	3	6	3	4	6	7
20	5	5	5	6	5	5	9
21	10	10	10	10	10	11	6
22	20	19	17	19	19	20	20
Mean	12	12	12	12	12	11	13

Table A35(continued). 1973 STORM DATA FOR TOTAL ORGANIC CARBON (mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	17	17	17	17	17	13	--
2	18	18	18	18	18	16	18
3	15	15	15	15	15	--	--
4	16	16	16	16	16	--	--
5	10	10	10	10	10	12	13
6	15	15	10	10	12	13	11
7	15	15	15	15	15	9	22
8	16	16	16	16	16	--	--
9	14	14	14	14	14	19	5
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	26	24	22	19	22	22	25
13	35	35	31	33	34	11	16
14	--	25	19	21	22	20	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	13	10	10	13	12	9	11
19	8	5	6	6	6	7	8
20	--	--	--	--	--	8	10
21	14	14	14	13	14	12	15
22	19	18	17	21	19	23	--
Mean	17	17	16	16	16	14	14

Table A35 (continued). 1973 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	13	13	13	13	13	15	--
2	19	19	16	16	18	14	18
3	12	12	12	12	12	--	--
4	13	13	13	13	13	--	--
5	10	10	12	12	11	14	15
6	14	14	14	14	14	14	14
7	--	--	--	--	--	--	17
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	27	23	20	24	24	20	28
13	16	11	14	16	16	14	35
14	--	--	--	--	--	25	29
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	20	12	11	12	14	10	12
19	6	7	7	9	7	8	9
20	8	10	8	10	9	9	9
21	16	13	12	12	13	12	12
22	23	23	29	26	25	27	21
Mean	15	14	14	15	14	15	18

Table A36. 1974 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	26	--	--	--	--	--	--
24	14	--	--	--	--	--	--
25	23	22	21	21	22	18	19
26	16	14	14	18	16	17	15
27	13	14	12	17	14	14	14
28	25	26	25	23	25	20	16
29	--	--	--	--	--	--	--
30	16	18	20	21	19	17	22
31	16	16	17	17	17	22	22
32	22	22	19	23	22	26	--
33	19	23	31	29	26	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	8	7	--	7	8	--	10
37	8	7	--	7	8	--	10
38	10	10	10	10	10	19	19
39	19	16	17	14	17	10	6
40	5	6	6	8	6	7	5
41	10	7	10	13	10	12	6
42	6	--	--	--	--	7	--
43	12	4	2	4	6	2	8
44	10	12	14	14	13	10	4
45	10	8	4	4	7	6	2
Mean	14	13	14	14	14	13	11

Table A36 (continued). 1974 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	20	--	--	--	--	--	--
24	16	--	--	--	--	--	--
25	21	20	20	21	21	20	18
26	22	19	24	33	25	21	19
27	16	16	17	17	17	15	15
28	18	22	18	20	20	20	22
29	--	--	--	--	--	--	--
30	16	17	18	19	18	22	24
31	21	22	21	22	22	24	26
32	20	19	25	40	26	34	--
33	25	40	38	34	34	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	19	14	14	15	16	16	20
37	19	14	14	15	16	16	20
38	--	--	--	--	20	28	22
39	21	20	21	20	21	19	18
40	16	--	--	--	--	15	11
41	13	12	11	11	12	13	12
42	13	--	--	--	--	15	16
43	16	10	8	10	11	6	6
44	12	6	8	6	8	10	8
45	12	12	12	20	14	12	6
Mean	17	17	17	20	18	18	16

Table A36 (continued). 1974 STORM DATA FOR TOTAL ORGANIC CARBON
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	17	--	--	--	--	--	--
24	13	--	--	--	--	--	--
25	--	--	--	--	--	26	24
26	--	--	--	--	--	24	19
27	15	15	16	13	15	12	14
28	20	22	17	17	19	17	16
29	--	--	--	--	--	--	--
30	21	20	16	16	18	20	23
31	20	20	20	18	20	23	22
32	20	27	25	39	22	32	--
33	25	39	--	--	32	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	15	15	14	14	15	16	23
37	15	15	14	14	15	16	23
38	--	--	--	--	23	28	19
39	17	16	18	17	17	--	--
40	16	17	22	19	19	21	21
41	20	16	17	17	18	17	18
42	14	9	10	8	10	13	9
43	16	14	16	14	15	12	14
44	8	8	12	12	10	16	14
45	12	10	12	10	11	14	12
Mean	16	17	16	16	17	19	18

Table A37. 1971 DRY WEATHER DATA FOR BIOCHEMICAL OXYGEN DEMAND (mg/l)

Monitored period	Point A Day 1	Day 2	Day 3	Main[a]
1-3	3	3	3	
4-6	1	1	1	
7-9	1	2	1	
11-13	2	1	1	
14-15	2	1	--	
16-18	1	2	10	
19-21	1	2	3	
				2
	Point B			
1-3	8	6	7	
4-6	3	6	4	
7-9	7	3	4	
11-13	6	4	4	
14-15	5	2	--	
16-18	3	3	8	
19-21	2	6	6	
				5
	Point C			
1-3	20	8	8	
4-6	7	6	7	
7-9	6	2	3	
11-13	7	4	4	
14-15	7	3	--	
16-18	7	7	11	
19-21		1	5	
				7

a. Mean of all data points.

Table A38. 1971 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	3	3	3	3	3	4	1
2	3	2	2	2	2	2	--
3	1	1	1	1	1	2	2
4	1	1	1	1	1	1	0
5	<1	<1	<1	2	<1	2	2
6	2	2	2	1	2	2	4
7	4	3	1	1	2	--	--
8	3	2	1	1	2	3	1
9	4	3	1	1	2	1	3
10	3	2	2	2	2	3	3
11	3	4	4	3	4	4	6
12	2	2	2	2	2	3	3
Mean	3	2	2	2	2	3	3

Table A38 (continued). 1971 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	7	7	7	7	7	2	4
2	9	7	8	6	8	3	--
3	--	--	--	--	--	--	--
4	8	7	4	7	6	6	4
5	6	5	4	4	5	5	4
6	5	6	5	3	5	4	2
7	6	4	2	2	4	--	--
8	3	3	2	2	2	4	2
9	3	3	2	2	2	3	4
10	4	--	6	4	5	7	8
11	5	7	9	4	6	9	8
12	5	5	6	7	6	5	4
Mean	6	5	5	4	5	5	4

Table A38 (continued). 1971 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	4	4	3	--
3	1	5	4	4	4	5	5
4	--	--	--	14	14	5	4
5	--	--	--	20	20	13	13
6	--	--	4	--	4	3	3
7	--	9	--	--	9	--	--
8	--	--	--	4	4	6	4
9	--	--	--	--	--	--	--
10	9	--	--	9	9	13	12
11	--	--	--	2	2	4	5
12	--	--	--	5	5	3	4
Mean	5	7	4	8	8	6	6

Table A39 (continued). 1973 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	3	3	4	4	4	1	2
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	3	3	3	3	3	2	2
6	1	1	2	2	2	2	<1
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	8	9	8	10	9	6	8
13	9	12	6	13	10	4	2
14	--	6	5	5	5	4	4
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	4	4	4	4	4	3	1
19	2	2	2	3	2	1	2
20	--	--	--	--	--	<1	2
21	2	2	3	4	3	4	--
22	2	3	3	3	3	7	4
Mean	4	5	4	5	5	3	3

Table A39. 1973 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	2	2	2	2	2	1	1
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	--	--	8	8	8	2	1
6	2	2	3	3	2	3	2
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	4	4	4	6	4	5	6
13	1	1	1	1	1	4	1
14	1	1	2	1	1	3	2
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	2	1	1	1	1	1	<1
19	1	1	1	1	1	<1	<1
20	<1	<1	<1	<1	<1	<1	2
21	4	3	4	5	4	5	--
22	3	3	3	3	3	4	4
Mean	2	2	3	3	3	3	2

Table A39 (continued). 1973 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	3	3	3	3	3	2	6
3	--	--	--	--	--	--	--
4	--	--	--	--	--	--	--
5	3	3	1	1	2	2	1
6	1	1	3	3	2	4	2
7	--	--	--	--	--	--	--
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	6	5	5	6	6	5	7
13	6	4	4	4	4	3	5
14	--	--	--	--	--	4	5
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	6	3	3	3	4	2	2
19	3	3	3	3	3	3	1
20	<1	<1	<1	<1	<1	<1	2
21	2	2	2	2	2	1	--
22	3	4	5	5	4	5	3
Mean	3	3	3	3	3	3	3

Table A40. 1974 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--
25	4	3	3	3	3	3	2
26	4	4	4	4	4	3	3
27	4	3	3	3	3	5	3
28	3	4	4	4	4	3	2
29	--	--	--	--	--	--	--
30	4	5	5	4	4	4	3
31	3	4	4	4	4	3	3
32	2	4	--	--	3	4	--
33	4	3	4	4	4	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	2	3	2	3	2	2	4
37	2	3	2	3	2	2	4
38	--	--	--	--	4	3	4
39	4	4	4	4	4	3	2
40	2	2	2	2	2	2	2
41	6	4	3	5	4	2	2
42	4	--	--	--	--	5	--
43	4	3	3	3	3	4	1
44	4	3	4	3	4	5	3
45	4	4	2	4	4	1	2
Mean	3	3	3	3	3	3	2

Table A40 (continued). 1974 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND
(mg/l)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--
25	5	3	4	3	4	3	2
26	9	6	5	4	6	3	3
27	5	4	4	4	4	4	4
28	4	4	4	4	4	5	3
29	--	--	--	--	--	--	--
30	5	5	5	4	5	4	4
31	3	4	4	4	4	4	3
32	3	3	--	--	3	4	--
33	4	4	4	5	4	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	3	4	3	4	4	6	5
37	3	4	3	4	4	6	5
38	--	--	--	--	5	7	5
39	5	4	4	4	4	4	3
40	5	--	--	--	--	4	3
41	6	4	4	4	5	2	2
42	6	--	--	--	--	5	5
43	7	4	5	4	5	7	7
44	8	4	4	6	6	5	5
45	8	5	5	8	6	3	4
Mean	5	4	4	4	4	4	3

Table A40 (continued). 1974 STORM DATA FOR BIOCHEMICAL OXYGEN DEMAND (mg/l)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	--	--	--	--	--	--	--
24	--	--	--	--	--	--	--
25	--	--	--	--	--	5	4
26	--	--	--	--	--	5	3
27	4	3	4	3	4	4	5
28	3	3	4	3	3	5	3
29	--	--	--	--	--	--	--
30	6	4	3	2	4	3	4
31	2	3	3	3	3	4	2
32	2	2	--	--	2	5	--
33	4	4	--	7	5	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	3	3	3	4	3	5	6
37	3	3	3	4	3	5	6
38	--	--	--	--	6	5	4
39	3	4	4	4	4	--	--
40	5	7	6	5	6	8	7
41	10	4	4	4	6	6	3
42	7	3	3	2	4	3	8
43	10	11	11	9	10	11	13
44	7	9	6	7	7	6	5
45	5	4	4	5	4	3	7
Mean	4	4	4	4	4	5	5

Table A41. 1971 DRY WEATHER FECAL COLIFORM
(No./100 ml)

Monitoring period	Day 1	Day 2	Day 3	Mean[a]
	Point A			
1-3	500	180	1400	
4-6	190	8800	3100	
7-9	200	250	210	
11-13	310	75	214	
14-15	91	156	--	
16-18	260	700	1500	
19-21	300	145	145	
				353
	Point B			
1-3	45	110	410	
4-6	53	3000	41000	
7-9	4200	1030	230	
11-13	100	72	300	
14-15	98	106	--	
16-18	630	360	140	
19-21	110	1960	138	
				344
	Point C			
1-3	190	250	53	
4-6	--	1100	--	
7-9	300	110	50	
11-13	100	125	122	
14-15	21	3	--	
16-18	74	150	60	
19-21	--	38	42	
				84

a. Geometric Mean of all data points.

Table A42. 1971 STORM DATA FECAL COLIFORM
(No./100 ml)

Storm No.	Point A						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	18000	1300	350
2	4200	8200	2200	1200	3950	5200	--
3	7000	13500	210	360	5268	160	3400
4	4700	4700	2000	3100	3625	2600	440
5	12600	250	290	250	3348	600	610
6	17800	21800	8100	750	12112	6000	6000
7	118000	81000	14500	5200	54675	550	1900
8	61000	83000	16000	25000	46250	2000	1400
9	60000	25000	24000	8500	29375	8800	2600
10	8200	900	4900	2400	4100	2200	920
11	20000	19300	13800	12300	16350	10000	770
12	900	6200	5600	4100	4200	5000	3400
Geometric Mean	13116	9412	4032	2579	5986	2168	1370

Table A42 (continued). 1971 STORM DATA FECAL COLIFORM
(No./100 ml)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	2000	220	130
2	1600	2600	2100	1700	1963	12700	--
3	--	4600	--	--	4600	--	--
4	2100	1000	780	370	882	480	200
5	380	1260	933	1500	305	380	72300
6	9600	13200	10200	2430	7486	9000	1000
7	6100	7000	830	790	2300	700	340
8	2400	7600	4300	5400	4537	2000	740
9	3200	3300	2800	2500	2932	7000	1800
10	210	--	560	450	375	210	450
11	1400	4300	2500	2500	2477	2900	530
12	270	660	710	480	496	400	360
Geometric Mean	1465	3159	1656	1294	1775	1243	770

Table A42 (continued). 1971 STORM DATA FECAL COLIFORM
(No. /100 ml)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	--	--	--	1900	1900	1000	--
3	650	500	140	600	--	120	50
4	--	--	--	80	80	100	70
5	--	--	--	21	21	38	129
6	--	--	520	--	520	260	28
7	800	--	--	--	800	70	340
8	--	--	--	460	460	660	500
9	--	--	--	--	--	--	--
10	250	--	--	70	--	90	71
11	--	--	--	580	580	1200	1500
12	--	--	--	50	50	74	85
Geometric Mean	507	--	265	191	265	184	139

Table A43. 1973 STORM DATA FECAL COLIFORM
(No./100 ml)

Storm No.	Point A 0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	--	--	--
2	4500	4500	4900	4900	4700	1950	1600
3	--	--	--	--	900	1900	800
4	Monitored As Part Of Storm 3					--	--
5	--	--	650	650	650	445	1000
6	1200	1200	260	260	730	960	490
7	--	--	--	--	--	700	510
8	--	--	--	--	520	--	--
9	--	--	--	--	3400	1100	78
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	1900	50000	12000	24000	21975	6700	3800
13	8200	2700	1200	1500	3400	550	700
14	1133	1400	3700	1100	1833	1500	45
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	1900	2000	730	1300	1482	480	350
19	210	1900	900	290	825	860	1600
20	11700	13300	3400	4500	8225	2500	250
21	21000	24500	38300	230000	78450	86000	5800
22	17600	12000	7100	69000	10900	4687	3500
Geometric Mean	3746	6048	2432	3895	3084	1785	880

Table A43 (Continued). 1973 STORM DATA FECAL COLIFORM
(No./100 ml)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	640	--	--
2	4500	4500	4900	4900	4700	1950	1600
3	--	--	--	--	900	1900	500
4	Monitored As Part Of Storm 3						
5	230	230	1200	1200	715	855	390
6	2500	2500	830	830	1665	2650	640
7	--	--	--	--	120	1700	1460
8	--	--	--	--	1300	--	--
9	--	--	--	--	450	5940	2300
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	15000	150000	600000	94000	214750	4400	7700
13	6300	5600	14700	5100	7925	4300	4300
14	--	1800	800	560	1040	960	17
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	1300	1800	1500	1000	1400	770	620
19	900	1500	1800	1800	1500	710	1200
20	--	--	--	--	--	680	1000
21	13000	10100	6200	5600	8725	4700	2300
22	6500	5500	4200	4400	5150	5500	8700
Geometric Mean	3069	4098	5249	2794	2117	2100	1562

Table A43(continued). 1973 STORM DATA FECAL COLIFORM
(No./100 ml)

Storm No.	Point C						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
1	--	--	--	--	1900	--	--
2	5300	5300	3100	3100	4200	10500	12500
3	--	--	--	--	500	620	700
4	Monitored As Part Of Storm 3						
5	200	200	210	210	205	95	215
6	2300	2300	1500	1500	1900	3700	880
7	--	--	--	--	--	--	730
8	--	--	--	--	--	--	--
9	--	--	--	--	--	--	--
10	--	--	--	--	--	--	--
11	--	--	--	--	--	--	--
12	5000	2300	2400	3500	3300	3500	500
13	700	600	1100	200	650	830	1000
14	--	--	--	--	--	--	--
15	--	--	--	--	--	--	--
16	--	--	--	--	--	--	--
17	--	--	--	--	--	--	--
18	500	300	740	300	460	360	190
19	180	370	170	210	232	130	130
20	600	800	900	600	725	640	540
21	143	310	270	580	326	1800	3500
22	990	1800	2567	2800	2039	2600	2800
Geometric Mean	761	836	852	728	860	994	809

Table A44. 1974 STORM DATA FECAL COLIFORM
(No/100ml)

Storm No.	Point A 0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	20000	--	--	--	--	--	--
24	8100	--	--	--	--	--	--
25	1800	1500	910	1400	1400	1250	870
26	560	1400	2400	2300	1700	1900	1500
27	720	650	1030	2800	1300	1100	600
28	710	800	1600	900	1000	490	490
29	--	--	--	--	--	--	--
30	6800	3200	2100	5500	4400	--	--
31	2600	2600	2400	2700	2600	3600	6500
32	3400	9600	--	--	6500	5500	--
33	4600	7100	4300	6200	5500	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	5000	2600	1600	1000	2600	800	5500
37	5000	2000	1600	1000	2600	800	5500
38	--	--	--	--	5500	9400	2600
39	2900	2200	2030	2300	2350	830	440
40	1400	1950	1000	300	1160	160	40
41	1630	300	600	1030	900	430	110
42	510	--	--	--	--	760	--
43	500	300	430	400	410	180	100
44	100	33	--	--	70	200	100
45	20	180	20	360	140	210	450
Geometric Mean	1490	1157	1054	1363	1253	887	712

Table A44 (continued). 1974 STORM DATA FECAL COLIFORM
(No/100ml)

Storm No.	Point B						
	0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	1300	--	--	--	--	--	--
24	2400	--	--	--	--	--	--
25	1200	1200	1400	720	1200	700	830
26	1900	1460	4100	3800	2800	2300	2000
27	930	2900	2100	5400	2600	1500	900
28	1800	1800	1200	2800	1900	870	1300
29	--	--	--	--	--	--	--
30	2000	2100	1300	730	1500	2600	2700
31	1650	3100	3400	2300	2600	2700	2600
32	3900	5600	--	--	2600	6100	--
33	4900	5000	7200	7500	6100	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	3300	3800	4000	3100	3600	2300	4600
37	3300	3800	4000	3100	3600	2300	4600
38	--	--	--	--	4600	11000	2700
39	2100	1900	2030	1600	1900	2400	1100
40	930	--	--	--	--	700	270
41	1000	1200	1760	1400	1390	780	380
42	2400	--	--	--	--	162	140
43	900	1100	260	300	640	310	160
44	1030	570	670	670	740	730	770
45	3200	3000	5000	14000	6300	6200	3700
Geometric Mean	1932	2159	2049	2096	2057	1541	1114

Table A44 (continued). 1974 STORM DATA FECAL COLIFORM
(No/100ml)

Storm No.	Point C 0-6 hours	7-12 hours	13-18 hours	19-24 hours	0-24 hours	25-48 hours	49-72 hours
23	650	--	--	--	--	--	--
24	410	--	--	--	--	--	--
25	--	--	--	--	--	530	390
26	--	--	--	--	--	3900	1400
27	800	430	620	730	600	360	190
28	260	400	480	680	450	120	580
29	--	--	--	--	--	--	--
30	1300	1300	900	900	1100	1400	1900
31	800	1400	1400	2000	1400	1900	2400
32	2400	2500	--	--	2400	3800	--
33	3600	4300	--	7400	3800	--	--
34	--	--	--	--	--	--	--
35	--	--	--	--	--	--	--
36	5600	3200	2200	2600	3400	1800	9600
37	5600	3200	2200	2600	3400	1800	9600
38	--	--	--	--	9600	17000	2200
39	730	1060	830	960	900	--	--
40	600	300	200	100	300	800	2300
41	870	830	860	630	800	400	530
42	1300	1830	600	980	1180	430	700
43	130	70	170	230	150	70	100
44	270	170	130	100	270	830	830
45	800	1300	700	1200	1000	650	330
Geometric Mean	914	914	629	830	813	909	1018

APPENDIX VI A

STORMWATER MANAGEMENT MODEL
RUNOFF BLOCK DATA

Table A1. SUBAREA DATA FOR RUNOFF BLOCK

Subarea No.	Number of gutter[b] or manhole	Width, meters	Width, feet	Area, hectares	Area, acres	Percent impervious	Slope, meter/meter	Gauge No.	Land use[a]
1	160[b]	393.2	1290	2.43	6.0	40	0.001	1	5
2	141[b]	243.8	800	1.86	4.6	25	0.001	1	1
3	142[b]	286.5	940	2.23	5.5	40	0.001	1	1
4	143[b]	262.1	860	2.31	5.7	50	0.002	1	5
5	144[b]	280.4	920	2.60	6.4	80	0.0005	1	4
6	155[b]	426.7	1400	1.34	3.3	99	0.001	1	4
7	156[b]	475.5	1560	1.62	4.0	70	0.001	1	4
8	70[b]	152.4	500	0.16	0.4	95	0.001	1	4
9	154[b]	283.5	930	1.66	4.1	61	0.003	1	2
10	153[b]	131.1	430	1.17	2.9	60	0.001	1	2
11	152[b]	143.3	470	1.22	3.0	60	0.002	1	1
12	151[b]	121.9	400	1.05	2.6	60	0.002	1	1
13	150[b]	195.1	640	1.86	4.6	60	0.001	1	1
14	39	0.3	1	0.04	0.1	1	0.0003	1	3
15	40	24.4	80	0.45	1.1	50	0.0004	1	2
16	41	225.6	740	1.78	4.4	54	0.001	1	2
17	42[b]	106.7	350	1.26	3.1	55	0.002	1	2
18	157[b]	1828.8	6000	145.8	360.0	60	0.0006	1	1
19	47	0.3	1	0.04	0.1	1	0.0003	1	3
20	73[b]	365.8	1200	4.78	11.3	55	0.009	3	3
21	122[b]	487.7	1600	4.46	11.0	40	0.009	3	3
22	218	426.7	1400	4.78	11.8	35	0.009	3	3
23	76	304.8	1000	3.85	9.5	50	0.009	3	2
24	49	304.8	1000	2.39	5.9	50	0.009	3	1
25	98	487.7	1600	4.78	11.8	55	0.009	3	1
26	69	609.6	2000	2.39	5.9	50	0.009	3	2
27	59	304.8	1000	5.95	14.7	35	0.009	3	2
28	138[b]	487.7	1600	8.91	22.0	60	0.009	3	3
29	139[b]	487.7	1600	4.78	11.8	40	0.009	3	3
30	148	396.2	1300	2.39	5.9	60	0.009	3	2
31	145	365.8	1200	3.56	8.8	50	0.009	3	2
32	119	243.8	800	4.78	11.8	50	0.009	2	1

Table A1 (continued). SUBAREA DATA FOR RUNOFF BLOCK

Subarea No.	Number of gutter or manhole[b]	Width, meters	Width, feet	Area, hectares	Area, acres	Percent impervious	Slope, meter/meter	Gauge No.	Land use[a]
33	118	427.7	1400	5.35	13.2	50	0.009	2	1
34	99	213.4	700	1.50	3.7	50	0.009	2	3
35	55	182.9	600	1.17	2.9	35	0.009	1	3
36	54	365.8	1200	2.07	5.1	30	0.009	1	1
37	51[b]	365.8	1200	5.63	13.9	30	0.009	1	1
38	158[b]	274.3	900	1.17	2.9	30	0.009	1	3
39	159[b]	365.8	1200	5.35	13.2	30	0.009	1	1
40	55	609.6	2000	2.67	6.6	40	0.009	1	3
41	115[b]	213.4	700	7.74	19.1	50	0.009	2	1
42	159[b]	579.1	1900	3.56	8.8	55	0.009	2	3
43	124[b]	335.3	1100	5.35	13.2	50	0.009	2	4
44	127[b]	1079.3	3600	20.49	50.6	60	0.009	2	4
45	130[b]	853.4	2800	5.95	14.7	50	0.009	2	1
46	58	152.4	500	14.26	35.2	25	0.009	1	5
47	148	0.3	1	0.04	0.1	1	0.009	2	1
48	58	0.3	1	0.04	0.1	1	0.009	1	1
60	111	670.6	2200	7.33	18.1	50	0.005	1	1
61	116	427.7	1400	2.84	7.0	60	0.005	1	1
62	115[b]	487.7	1600	2.19	5.4	55	0.005	1	3
63	89[b]	609.6	2000	3.08	7.6	50	0.005	1	2
64	113[b]	487.7	1600	2.15	5.3	50	0.005	1	2
65	88[b]	487.7	1600	3.48	8.6	50	0.005	1	2
66	79	655.3	2150	3.08	7.6	50	0.005	1	1
67	117	182.9	600	0.65	1.6	75	0.005	1	3

(a) Land use:
1 = single family residential
2 = multi family residential
3 = commercial
4 = industrial
5 = parkland

(b) Indicates a gutter

Table A2. GUTTER/PIPE DATA

Gutter/pipe number	Inlet number	Width, meters	Width, feet	Length, meters	Length, feet	Slope meter/meter
70	110	0.30	1.0	61.0	200	.0010
73	136	0.40	1.3	149.4	490	.0047
88	91	0.76	2.5	274.3	900	.0036
89	114	0.30	1.0	286.5	940	.0064
98	97	1.98	6.5	251.5	825	.0044
118	53	1.22	4.0	225.6	740	.0215
122	136	2.29	7.5	281.9	925	.0026
124	123	0.82	2.7	350.5	1150	.0047
127	126	0.91	3.0	548.6	1800	.0040
130	129	0.46	1.5	457.2	1500	.0018
139	138	0.46	1.5	243.8	800	.0120
141	102	0.24	0.8	121.9	400	.0042
142	103	0.30	1.0	146.3	480	.0055
143	104	0.34	1.1	131.1	430	.0220
144	105	0.46	1.5	137.2	450	.0223
150	131	0.21	0.7	198.1	650	.0042
151	132	0.30	1.0	115.8	380	.0051
152	133	0.30	1.0	134.1	440	.0065
153	34	0.30	1.0	131.1	430	.0211
154	35	0.30	1.0	128.0	420	.0350
155	106	0.40	1.3	213.4	700	.0223
156	107	0.30	1.0	134.1	440	.0026
157	48	1.68	5.5	1051.6	3450	.0032
158	55	0.91	3.0	134.1	440	.0053
159	109	0.61	2.0	199.6	655	.0041
160	101	0.21	0.7	182.9	600	.0042

Table A3. RUNOFF BLOCK INPUT DATA

```
 WATERSHED
'1**************RUN NUMBER 021   NOVEMBER 13, 1973  **********
   PREPARED BY THE ENVIRONMENTAL SCIENCES DIVISION OF ENVIREX

    49   150 1620   5.0     3

    80   5.0

  .05   .05   .05   .05   .05   .05   .05   .05   .05   .10
  .10   .10   .10   .10   .10   .10   .10   .10   .10   .10
  .10   .10   .10   .30   .30   .30   .30   .30   .30   .30
  .30   .30   .30   .05   .05   .05   .05   .05   .05   .05
  .05   .05   .05   .05   .05   .03   .03   .03   .03   .03
  .03   .03   .03   .03   .03   .03   .10   .10   .10   .10
  .10   .10   .10   .10   .10   .10   .10   .10   .06   .06
  .06   .06   .06   .06   .06   .06   .06   .06   .06   .06
  .12   .12   .12   .12   .12   .12   .12   .12   .12   .12
  .12   .12   .12   .12   .12   .12   .12   .12   .12   .12
  .12   .12   .12   .12   .12   .12   .12   .45   .45   .45
  .45   .45   .45   .30   .30   .30   .30   .12   .12   .12
  .12   .12   .12   .12   .12   .05   .05   .05   .05   .05
  .05   .05   .05   .05   .05   .05   .05   .05   .05   .05
  .05   .05   .05   .05   .05   .10   .10   .10   .10   .10
  .10   .10   .10   .10   .10   .10   .10   .10   .10   .10
  .05   .05   .05   .05   .05   .12   .12   .12   .12   .12
  .12   .12   .12   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .50   .50   .50   .50   .50   .50   .50   .50   .50   .50
  .10   .10   .10   .10   .10   .01   .01   .01   .01   .01
  .01   .01   .01   .01   .01   .01   .01   .01   .01   .01
  .01   .18   .18   .18   .18   .18   .18   .18   .18   .04
  .04   .04   .04   .04   .04   .04   .04   .04   .04   .04
```

Table A3 (continued). RUNOFF BLOCK INPUT DATA

1	35	55	600.	2.94	35.	
1	36	54	1200.	5.14	30.	
1	37	51	1200.	13.95	30.	
1	38	158	900.	2.94	30.	
1	39	159	1200.	13.22	30.	
1	40	55	2000.	6.61	40.	
2	41	119	700.	11.10	50.	
2	42	159	1900.	8.81	55.	
2	43	124	1100.	13.22	50.	
2	44	127	3600.	50.60	60.	0.25
2	45	130	2800.	14.69	50.	
1	46	58	500.	35.20	25.	
2	47	148	1.	.1	1.	
1	48	58	1.	.1	1.	
1	60	111	2200.	18.10	50.	.016
1	61	116	1400.	7.00	60.	.016
1	62	115	1600.	5.37	55.	.016
1	63	89	2000.	7.62	50.	.016
1	64	113	1600.	5.28	50.	.016
1	65	88	1600.	8.65	50.	.016
1	66	79	2150.	7.63	50.	.016
1	67	117	600.	1.65	75.	.016

Table A3 (continued). RUNOFF BLOCK INPUT DATA

```
1    1  1601290. 5.99   40..0037
1    2   141 800. 4.64   25..0037
1    3   142 940. 5.47   40..0037
1    4   143 860. 5.68   50. .008
1    5   144 920. 6.40   80..0017
1    6  1551400. 3.30   99. .004
1    7  1561560. 4.00   70. .004
1    8    70 500.  .41   95. .004
1    9   154 930. 4.13   61..0100
1   10   153 430. 2.89   60..0040
1   11   152 470. 3.04   60..0080
1   12   151 400. 2.63   60..0054
1   13   150 640. 4.64   60..0038
1   14    39  1.0   .1    1. .001
1   15    40  80. 1.08   50..0014
1   16    41 740. 4.44   54..0033
1   17    42 350. 3.10   55..0075
1   18  1576000.  360   60. .002
1   19    47  1.0   .1    1..0001
3   20   731200.11.75   55.
3   22  1221600.11.02   40.
3   21  2181400.11.75   35.
3   23   761000. 9.55   50.
3   24   491000. 5.87   50.
3   25   981600.11.75   55.
3   26   692000. 5.87   50.
3   27   591000.14.69   35.
3   28  1381600.22.04   60.
3   29  1391600.11.75   40.
3   30  1481300. 5.87   60.
3   31  1451200. 8.81   50.
2   32   119 800.11.75   50.
2   33  1181400.13.22   50.
2   34    99 700. 3.67   50.
```

Table A3 (continued). RUNOFF BLOCK INPUT DATA

1	70	110	2	1.0	200.	.0010	0.0	0.0	.013
1	73	136	2	1.25	490.	.0047	0.0	0.0	.013
1	88	91	2	2.5	900.	.0036	0.0	0.0	.013
1	89	114	2	1.0	940.	.0064	0.0	0.0	.013
2	98	97	2	6.5	825.	.0044	0.0	0.0	.013
2	118	53	2	4.0	740.	.0215	0.0	0.0	.013
1	122	136	2	7.5	925.	.0026	0.0	0.0	.015
2	124	123	2	2.66	1150.	.0047	0.0	0.0	.013
2	127	126	2	3.0	1800.	.0040	0.0	0.0	.013
2	130	129	2	1.5	1500.	.0018	0.0	0.0	.013
3	139	138	2	1.5	800.	.0120	0.0	0.0	.013
1	141	102	2	.835	400.	.0042	0.0	0.0	.013
1	142	103	2	1.0	480.	.0055	0.0	0.0	.013
1	143	104	2	1.13	430.	.0220	0.0	0.0	.013
1	144	105	2	1.5	450.	.0223	0.0	0.0	.013
1	150	131	2	.666	650.	.0042	0.0	0.0	.013
1	151	132	2	1.0	380.	.0051	0.0	0.0	.013
1	152	133	2	1.0	440.	.0065	0.0	0.0	.013
1	153	34	2	1.0	430.	.0211	0.0	0.0	.013
1	154	35	2	1.0	420.	.0350	0.0	0.0	.013
1	155	106	2	1.25	700.	.0223	0.0	0.0	.013
1	156	107	2	1.0	440.	.0026	0.0	0.0	.013
1	157	48	2	5.5	3450.	.00325	0.0	0.0	.015
1	158	55	2	3.0	440.	.0053	0.0	0.0	.013
1	159	109	2	2.0	655.	.0041	0.0	0.0	.013
1	160	101	2	.666	600.	.0042	0.0	0.0	.013

Table A3 (continued). RUNOFF BLOCK INPUT DATA

```
 49
 35   39   40   41   42   47   48   49   51   52   53   54   55   58   59   68
 69   76   79   91   97   99  101  102  103  104  105  106  107  109  110  111
113  114  115  116  117  119  123  126  129  131  132  133  136  138  145  148
 34

  7    3

 48   76   97  101  110  116  119

  4    1

 48   97  119  126
 56   49  5.0   16   20  150

      47      14.0    1

    1.5       150.      375.
```

Table A3 (continued). RUNOFF BLOCK INPUT DATA

37	51	1	13.95	38.4
42	52	3	8.81	46.4
36	54	1	5.14	24.0
38	55	3	2.94	12.8
40	55	3	6.61	32.0
46	58	5	35.20	41.6
48	58	1	.1	.1
27	59	2	14.69	38.4
21	68	3	11.75	20.8
26	69	2	5.87	30.4
23	76	2	1.55	52.8
66	79	1	7.63	60.0
65	91	2	8.65	48.0
25	97	1	11.75	40.0
34	99	3	3.67	14.4
1	101	5	5.99	30.0
2	102	1	4.64	13.0
3	103	1	5.47	19.0
4	104	5	5.68	20.0
5	105	4	6.40	16.0
6	106	4	3.30	13.5
7	107	4	7.02	15.0
39	109	1	13.22	35.2
8	110	4	.41	5.0
60	111	1	18.1	88.
64	113	2	5.28	32.0
63	114	2	7.62	60.0
62	115	3	5.37	32.0
61	116	1	7.0	42.
67	117	3	1.65	12.0
32	119	1	11.75	44.9
41	119	1	19.10	76.8

Table A3 (continued). RUNOFF BLOCK INPUT DATA

33	53	1	13.22	44.9
35	55	3	2.94	19.2
45	129	1	14.69	48.0
18	48	1	359.6	1056.0
10	34	2	2.89	11.0
9	35	2	4.13	28.0
14	39	3	.1	87.0
15	40	2	1.08	9.0
16	41	2	4.44	21.0
17	42	2	3.10	11.0
19	47	3	.1	87.0
24	49	1	5.87	22.4
43	123	4	13.22	49.5
44	126	4	50.60	137.5
13	131	1	4.64	16.0
12	132	1	2.63	14.0
11	133	1	3.04	15.0
20	136	3	11.75	40.0
22	136	3	11.02	43.0
28	138	3	22.04	84.8
29	138	3	11.75	44.9
31	145	2	8.81	24.0
30	148	2	5.87	20.8
47	148	1	.1	.1

APPENDIX VI B

STORMWATER MANAGEMENT MODEL

TRANSPORT BLOCK DATA

Table B1. MANHOLE DATA

Manhole number	Upstream element 1	Upstream element 2	Upstream element 3
33	223		
34	153		
35	154	258	
36	259	74	
38	261	230	
39	257		
40	256		
41	255		
42			
44	265		
45	71		
47	72		
48	157		
49			
51			
52			
53	118	204	
54			
55	158		
58			
59	224		
62			
63			
68	268	243	
69	96	134	
76			
77	217		
79			
80	85		
84	83		
91	88	90	
97	98	221	
99	202	100	
101	160		
102	141		
103	142		
104	143		
105	144		
106	155		
107	156		
108	159	210	
109	229	70	
110			

Table B1 (continued). MANHOLE DATA

Manhole number	Upstream element 1	Upstream element 2	Upstream element 3
111	212		
113	89	93	92
114			
115			
116			
117	94		
119	222		
120			
121			
123	125	124	
126	128	127	
129	231	130	
131	150		
132	151		
133	152		
135	137		
136	122		
138	139		
140			
145	147		
148			
149			
206	146		
208			
214	215		
219			

Table B2. CONDUIT INPUT DATA

Element number	Length		Width		Manning
	meters	feet	meters	feet	
70	60	200	0.30	1.0	0.013
71	30	100	1.68	5.5	0.015
72	853	2800	1.22	4.0	0.015
73	149	490	0.38	1.25	0.013
74	1024	3360	1.22	4.0	0.013
75	3	10	1.68	5.5	0.015
78	195	640	2.29	7.5	0.015
80	52	170	1.07	3.5	0.013
82	73	240	0.91	3.0	0.013
83	21	70	1.22	4.0	0.013
85	12	40	1.22	4.0	0.013
88	274	900	0.76	2.5	0.013
89	287	940	0.30	1	0.013
90	91	300	0.91	3	0.013
92	91	300	0.91	3	0.013
93	82	270	0.46	1.5	0.013
94	274	900	0.91	3	0.013
95	91	300	0.91	3	0.013
96	146	480	2.13	7	0.013
98	251	825	1.98	6.5	0.013
100	195	640	0.30	1	0.013
108	18	60	3.35	11	0.013
118	226	740	1.22	4	0.013
122	282	925	2.29	7.5	0.015
124	351	1150	0.82	2.7	0.013
125	238	780	0.91	3	0.013
127	549	1800	0.91	3	0.013
128	244	800	0.91	3	0.013
130	439	1440	0.46	1.5	0.013
134	98	320	0.61	2	0.013
137	146	480	0.61	2	0.013
139	244	800	0.46	1.5	0.013
141	122	400	0.26	0.84	0.013
142	146	480	0.30	1.0	0.013
143	131	430	0.38	1.25	0.013
144	137	450	0.46	1.5	0.013
146	305	1000	0.99	3.25	0.013
147	195	640	0.82	2.7	0.013
150	198	650	0.20	0.666	0.013
151	116	380	0.30	1	0.013
152	134	440	0.30	1	0.013
153	131	430	0.30	1	0.013
154	128	420	0.38	1.25	0.013

Table B2 (continued). CONDUIT INPUT DATA

Element number	Length		Width		Manning
	meters	feet	meters	feet	
155	3	10	0.46	1.5	0.013
156	134	440	0.91	3	0.013
157	1052	3450	1.68	5.5	0.015
158	134	440	0.91	3	0.013
159	200	655	0.61	2	0.013
160	183	600	0.20	0.67	0.013

Table B3. DAILY AND HOURLY CORRECTION FACTORS FOR SEWAGE DATA

Day	Flow	BOD	Suspended solids	Total coliform
SUNDAY	0.851	0.93	0.82	0.276
MONDAY	1.033	1.18	0.995	2.65
TUESDAY	1.109	1.40	1	1
WEDNESDAY	1.116	1.36	0.60	0.233
THURSDAY	1.092	1.15	1	1
FRIDAY	1.096	1.78	0.96	0.83
SATURDAY	0.937	1.18	0.86	1
HOUR				
1 AM	0.740	1.26	0.83	0.69
2	0.670	1.11	0.62	0.48
3	0.630	1.10	0.60	0.32
4	0.590	1.03	0.93	0.35
5	0.540	0.88	0.67	0.27
6	0.560	1.00	0.62	0.32
7	0.670	1.02	0.50	0.39
8	0.960	0.85	0.56	0.41
9	1.420	1.02	0.59	0.41
10	1.190	1.26	0.76	0.48
11	1.200	1.36	0.90	1.44
12	1.150	1.34	0.95	1.28
13	1.170	1.49	1.08	1.28
14	1.110	1.75	1.21	2.97
15	1.080	1.47	1.02	2.15
16	1.150	1.56	1.10	0.66
17	1.210	1.59	0.96	1.09
18	1.230	1.63	0.91	1.56
19	1.250	1.36	0.87	1.39
20	1.210	1.40	0.93	0.94
21	1.170	1.41	0.87	0.55
22	1.150	1.31	0.99	2.32
23	0.880	1.31	1.02	1.04
24	1.070	1.25	0.89	1.22

Table B4. POPULATION DATA FOR SUBAREAS
WITH RESIDENTIAL LAND USE

Residential subarea number	Population #/hectare	Density (#/acre)	Subarea total population
2	2.35	5.8	27
3	8.06	19.9	109
9	8.83	21.8	122
10	8.38	20.7	60
11	10.25	25.3	76
12	5.55	13.7	36
13	10.9	26.9	124
15	18.75	46.3	51
16	15.19	37.5	165
17	10.33	25.5	79
18	5.80	14.3	5112
23	10.13	25.0	237
24	6.08	15.0	89
25	6.08	15.0	177
26	10.13	25.0	148
27	10.13	25.0	369
30	10.13	25.0	148
31	10.13	25.0	220
32	6.08	15.0	177
33	6.08	15.0	198
36	6.08	15.0	77
37	6.08	15.0	208
39	6.08	15.0	198
41	6.08	15.0	287
45	6.08	15.0	220
47	4049.6	9999.	999
48	4049.6	9999.	999
60	7.49	18.5	335
61	7.49	18.5	130
62	7.49	18.5	100
63	7.49	18.5	140
64	7.49	18.5	98
65	7.49	18.5	160
66	7.49	18.5	140
67	7.49	18.5	30

Table B5. TRANSPORT INPUT DATA

```
TRANSPORT
    0    0
1    TRANSPORT BLOCK FOR RUN NUMBER 021
  150  100   49     1   10     2     2     3     4
      300.0       .0001        14.0
    1    1     1     1
    3 223 200    0  16
   34 153   0    0  16
   35 154 258    0  16
   36 259  74    0  16
   38 261 230    0  16
   39 257   0    0  16
   40 256   0    0  16
   41 255   0    0  16
   42   0   0    0  16
   44 265   0    0  16
   45  71   0    0  16
   47  72   0    0  16
   48 157   0    0  16
   49   0   0    0  16
   51                 16
   52                 16
   53 118 204         16
   54                 16
   55 158             16
   58                 16
```

Table B5 (continued). TRANSPORT INPUT DATA

124	121	0	0	1	1150.	2.7	.47	
125	126	0	0	1	780.	3.0	.44	
127	149	0	0	1	1800.	3.0	.40	
128	129	0	0	1	800.	3.0	.44	
130	120	0	0	1	1440.	1.5	.18	
134	135	0	0	1	320.	2.0	1.53	
137	138	0	0	1	480.	2.0	.90	
139	140	0	0	1	800.	1.5	1.2	
141	101	0	0	1	400.	.84	.42	
142	102	0	0	1	480.	1.0	.55	
143	103	0	0	1	430.	1.25	2.2	
144	104	0	0	1	450.	1.5	2.23	
146	87	0	0	1	1000.	3.25	.083	
147	148	0	0	1	640.	2.7	1.04	
150	62	0	0	1	650.	.666	.42	
151	131	0	0	1	380.	1.0	.51	
152	132	0	0	1	440.	1.0	.65	
153	133	0	0	1	430.	1.0	2.11	
154	34	0	0	1	420.	1.25	3.50	
155	105	0	0	1	10.	1.5	2.23	
156	106	0	0	1	440.	3.0	.26	
157	63	0	0	1	3450.	5.5	.325	.015
158	109	0	0	1	440.	3.0	.53	
159	214	0	0	1	655.	2.0	.41	
160	219	0	0	1	600.	.67	.42	
200	77	0	0	1	150.0	6.0		
202	53	0	0	1	540.	6.0	1.40	
204	55	0	0	1	275.	3.0	.42	
210	51	0	0	1	340.	1.25	.99	
212	91	0	0	1	300.	3.0	.14	
215	52	0	0	1	845.	1.25	1.01	
217	112	0	0	1	100.	8.0	.0055	
221	59	0	0	1	380.	2.7	3.24	
222	123	0	0	1	550.	4.0	.26	
223	112	0	0	1	50.	11.0	3.0	
224	145	0	0	1	475.	2.7	2.43	

Table B5 (continued). TRANSPORT INPUT DATA

59	224			16
62	0	0	0	16
63	0	0	0	16
68	268	243		16
69	96	134	0	16
76	0	0	0	16
77	217	0	0	16
79	0	0	0	16
2	85	300	0	16
84	83	0	0	16
91	88	90	0	16
97	98	221	0	16
99	202	100	0	16
101	160	0	0	16
102	141	0	0	16
103	142	0	0	16
104	143	0	0	16
105	144	0	0	16
106	155	0	0	16
107	156	0	0	16
109	159	210		16
110	229	70		16
111	0	0	0	16
113	212	0	0	16
114	89	93	92	16
115	0	0	0	16
116	0	0	0	16
117	94	0	0	16
119	222	0	0	16
120	0	0	0	16
121	0	0	0	16
123	125	124	0	16
126	128	127	0	16
129	231	130	0	16
131	150	0	0	16
132	151	0	0	16

Table B5 (continued). TRANSPORT INPUT DATA

133	152	0	0	16				
135	137	0	0	16				
136	122	73	0	16				
138	139	0	0	16				
140	0	0	0	16				
145	147	0	0	16				
148	0	0	0	16				
149	0	0	0	16				
206	146	0	0	16				
208	0	0	0	16				
214	215	0	0	16				
219	0	0	0	16				
70	208	0	0	1	200.	1.0	.10	
71	46	0	0	1	100.	5.5	.325	.015
72	46	0	0	1	2800.0	4.0	0.11	.015
73	76	0	0	1	490.	1.25	.47	
74	47	0	0	1	3360.	4.0	.11	
75	48	0	0	1	10.	5.5	.325	.015
78	136	0	0	1	640.	7.5	.056	.015
80	44	0	0	1	170.	3.5	.182	
82	110	0	0	1	240.	3.0	1.1	
83	81	0	0	1	70.	4.0	3.0	
85	81	0	0	1	40.	4.0	1.25	
88	111	0	0	1	900.	2.5	.36	
89	116	0	0	1	940.	1.0	.64	
90	79	0	0	1	300.	3.0	.46	
92	113	0	0	1	300.	3.0	.04	
93	115	0	0	1	270.	1.5	.53	
94	114	0	0	1	900.	3.0	1.7	
95	117	0	0	1	300.	3.0	1.7	
96	97	0	0	1	480.	7.0	.37	
98	99	0	0	1	825.	6.5	.44	
100	54	0	0	1	640.	1.0	2.35	
108	87	0	0	1	60.	11.0	3.0	
118	119	0	0	1	740.	4.0	2.15	
122	68	0	0	1	925.	7.5	.26	.015

Table B5 (continued). TRANSPORT INPUT DATA

227	107	0	0	1	10.	3.0	.26			
229	209	0	0	1	64.	3.0	1.2			
230	209	0	0	1	400.	1.75	.30			
231	58	0	0	1	410.	2.5	2.18			
243	49	0	0	1	480.	1.25	3.72			
255	42	0	0	1	270.	1.75	.76			
256	41	0	0	1	160.	1.75	1.1			
257	40	0	0	1	270.	1.75	1.13			
258	39	0	0	1	280.	2.5	.55			
259	35	0	0	1	10.0	2.5	0.673	.013		
260	36	0	0	1	430.0	4.5	0.326	.013		
261	37	0	0	1	50.0	3.0	0.070	.015		
264	38	0	0	1	600.	3.0	.07	.015		
265	37	0	0	1	130.	3.0	1.3			
268	69	0	0	1	250.	7.5	.90	.015		
300	84	0	0	1	150.0	6.0				
37	260	0	0	18		6.0				261.
46	75	0	0	20	29.1	2.0	166.3	16.7	5.06	72.
81	80	82	0	18		22.4				83.
87	264	95	78	20	15.	1.5	260.	33.3	5.0	146.
112	108	0	0	18		69.0				217.
209	227	0	0	18		3.0				230.

Table B5 (continued). TRANSPORT INPUT DATA.

```
 56    1    2    4   16   00                  13.6

    3.94      80.0      121.0     2.72E7

 829.0    81.0    17.1   150.0   440.0   100.0    83.0    41.2

 71      3.720      80.0      121.0
 47      1.390      80.0      121.0

10 342                  2.8920.70  21. 2.85  8.4  10.
 9 352                  4.1321.80  29. 3.10  8.7  10.
14 393                    .1
15 402                  1.0846.30  13. 3.84 10.5  10.
16 412                  4.4437.50  40. 3.60  9.4  10.
17 422                  3.1025.50  37. 2.13  8.5  10.
19 473                    .1
18 481                 359.614.23999.0 5.12       10.0
24 491                  5.87  15. 24.4  3.6       10.
37 511                 13.95  15. 58.1  3.6       10.
42 523                  8.81
33 531                 13.22  15. 55.0  3.6       10.
36 541                  5.14  15. 21.4  3.6       10.
38 553                  2.94
40 553                  6.61
46 585                 35.2
48 581                    .19999.
35 553                  2.94
27 592                 14.69  25.102.0  3.6       10.
21 683                 11.75
26 692                  5.87  25. 40.7  3.6       10.
23 762                  9.55  25. 66.3  3.6       10.
66 791                  7.63 18.5 39.1  3.6       10.
25 971                 11.75  15. 50.0  3.6       10.
65 912                  8.65 18.5 44.4  3.6       10.
34 993                  3.67
```

Table B5 (continued). TRANSPORT INPUT DATA

```
   3    2
  48
  81  209   37   47   46  112   87  206    3   36
 100.      25.     500.
 274  .0001      14.0
  11   24  112  397  735 1184 1302 1117  961  606  335  100
      .851      1.033      1.109      1.116      1.092      1.096      .937
      1.0        1.0        1.0        1.0        1.0        1.0       1.0
      1.0        1.0        1.0        1.0        1.0        1.0       1.0
      .74        .67        .63        .59        .54        .56       .67       .96
     1.42       1.19       1.20       1.15       1.17       1.11      1.08      1.15
     1.21       1.23       1.25       1.21       1.17       1.15       .88      1.07
      .85        .71        .60        .41        .46        .49       .72       .87
      .77       1.57       1.02        .87        .91        .94      1.07      1.07
     1.14        .99       1.45       1.16       1.55       1.29       .99      1.60
     1.05       1.05       1.10        .50        .66       1.33      1.10       .88
     1.03        .91        .66        .63        .94        .94      1.05      1.05
     1.16        .94       1.33       1.22       1.44       1.10       .88      1.05
     1.10        .64        .45        .87        .54        .48      1.29      1.18
     1.37       1.49       1.30       1.12        .89        .58       .45       .67
      .96       1.18        .84       1.01       2.82       1.77       .84       .71
```

Table B5 (continued). TRANSPORT INPUT DATA

```
11015   5.99
21021   4.64 5.82    8. 3.37 11.5  10.
31031   5.4719.92   27. 4.04  9.7  10.
41045   5.68
51054    6.40                              .658    30. 10.0
61064   3.30
71074   7.02
391091 13.22  15. 55.0  3.6        10.
 81104   .41
601111  18.1 18.5 93.0 5.12        10.
641132  5.28 18.5 27.1  3.6        10.
631142  7.62 18.5 39.2  3.6        10.
621153  5.37 18.5 27.6  3.6        10.
611161   7.0 18.5 36.0  3.6        10.
671173  1.65 18.5  8.4  3.6        10.
321191 11.75  15. 50.0  3.6        10.
411191 19.10  15. 79.6  3.6        10.
431234 13.22                            .082    0.1 70.0
441264 50.6                             1.54    0.1 50.0
451291 14.69  15. 61.2  3.6        10.
131311  4.6426.90   42. 2.97  9.9  10.
121321  2.6313.70   12. 3.00 10.7  10.
111331  3.0425.32   24. 3.20  8.8  10.
201363 11.75
221363 11.02
281383 22.03
291383 11.75
311452  8.81  25. 61.1  3.6        10.
301482  5.87  25. 40.7  3.6        10.
471481   .19999.                   10.
```

APPENDIX VI C

STORMWATER MANAGEMENT MODEL
STORAGE BLOCK DATA

Table C1. STORAGE BLOCK INPUT DATA

```
STORAGE
        81
         1          0
 1   12    22    33    41    51    61    71
         2          0          1          1
      21.8
         1      198.0       85.0
      20.0
 1       1     5141.0       20.0        8.5
   221.4
 16    30
STORAGE
       112
         1          0
 1   12    22    33    41    51    61    71
         2          0          1          1
      68.7
         1      550.0      125.0
      20.0
 1       1     5555.0       20.0        8.5
 16    30
   632.8
```

Table C2. MODIFICATIONS TO SUBROUTINE AREA

```
C      [illegible] = 2)
C
 9200 IF (QQIF .GT. 0.01) GO TO 102
      QQIF=0.0
      RCIF=0.0
      SCIF=0.0
      CCIF=0.0
      QQOU(3)=0.0
      RCOU(3)=0.0
      SCOU(3)=0.0
      QQOU(4)=0.0
      RCOU(4)=0.0
      SCOU(4)=0.0
      QQOU(7)=0.0
      RCOU(7)=0.0
      CCOU=0.0
      QQRL=0.0
      RCRL=0.0
      SCRL=0.0
      CCRL=0.0
  102 IF (QQOF .GT. 0.01) GO TO 103
      QQOF=0.0
      RCOF=0.0
      SCOF=0.0
      CCOF=0.0
      QQRM(3)=0.0
      RCRM(3)=0.0
      SCRM(3)=0.0
      QQRM(4)=0.0
      RCRM(4)=0.0
      SCRM(4)=0.0
      QQRM(7)=0.0
      RCRM(7)=0.0
```

Table C2 (continued). MODIFICATIONS TO SUBROUTINE AREA

```
C                                  [illegible]
C
 9100 IF (WAIF .GT. 0.01) GOTO 100
      WAIF=0.0
      BDIF=0.0
      SSIF=0.0
      COIF=0.0
      WAOO(3)=0.0
      BOOO(3)=0.0
      SSOO(3)=0.0
      WAOO(4)=0.0
      BOOO(4)=0.0
      SSOO(4)=0.0
      WAOO(7)=0.0
      BOOO(7)=0.0
      COOO=0.0
      WARL=0.0
      BORL=0.0
      SSRL=0.0
      CORL=0.0
  100 IF (WAOF .GT. 0.01) GO TO 101
      WAOF=0.0
      BOOF=0.0
      SSOF=0.0
      COOF=0.0
      WARM(3)=0.0
      BORM(3)=0.0
      SSRM(3)=0.0
      WARM(4)=0.0
      BORM(4)=0.0
      SSRM(4)=0.0
      WARM(7)=0.0
      BORM(7)=0.0
      CORM=0.0
  101 WRITE(6,691) [illegible]
     *                [illegible]
     *                [illegible]
     *                [illegible]
```

APPENDIX VI D

STORMWATER MANAGEMENT MODEL
RECEIVE BLOCK DATA

Table D1. RECEIVE INPUT DATA

```
RECEIVING

QUANTITYQUALITY
WATER CURRENTS AND QUALITY OF THE ROOT RIVER AT RACINE
INFLUENCED BY STORM-WATER DISCHARGES
**********STORM WATER INPUTS FROM THREE COMBINED SEWER AREAS
PREPARED BY THE ENVIRONMENTAL SCIENCES DIVISION OF ENVIREX

    1    0    0    0    0    0    0    0

    3 24.0  3.0  60.  0.0    7    6    7  3.0  4.6270.0    1              1

          1         2         3         4         5         6         7

      1  2      2  3      3  4      4  5      5  6      6  7

          1         2         3         4         5         6         7

    1    5   50

         0.      578.2       6.    578.23      12.     578.2      18.    578.17
        24.      578.2

    1 578.       .31                -548.                          15.0  5.5
    2578.2       .72                -556.                          10.8  5.6
    3578.8       .72                -572.                           8.6  3.8
    4 579.       .52                -576.                           7.0  1.8
    5 583.       .41                -579.                           5.0  0.0
    6 589.        .7                -588.                           5.6  4.6
    7 613.        .5   50.          -612.                           0.0 12.0
99999
```

Table D1 (continued). RECEIVE INPUT DATA

********** ROOT RIVER, RACINE, WISCONSIN **********
***** TIME IN HOURS *****

STAGE IN FEET
ENDQUANTITY

			1	1	0	1			
	1	3	24						
3	3	1	.50						
1		3.0	7.6	.04	.23		*** BOD-DO MG/L ***		
1		4.0		0		7.5	0		0.10
2		2.5		0		7.5	0		0.04
3		**2.5**		**0**		**7.5**	**0**		**1.02**
4		2.5		0		7.5	0		1.54
5		2.5		0		7.5	0		1.61
6		2.5		0		7.5	0		1.49
7		2.5		70.		7.5	7.5		1.74
99999									
7		25.0	0.0		0.5		**SUSPENDED SOLIDS**		
1		25.		0		7.5	0		
2		29.		0		7.5	0		
3		31.		0		7.5	0		
4		31.		0		7.5	0		
5		32.		0		7.5	0		
6		33.		0		7.5	0		
7		31.		780.		7.5	7.5		
99999									
7		500.	0.0		1.0		**COLI. MPN/100ML**		
1		500.							1.0
2		500.							1.0
3		500.							1.0
4		500.							1.0
5		500.							1.0
6		500.							1.0
7		500.		35360.					1.0

Table D1 (continued). RECEIVE INPUT DATA

1	1	2	3100.	200.	-552.	.05
2	2	3	4700.	175.	-564.	.1
3	3	4	3000.	200.	-574.	.28
4	4	5	3000.	150.	-577.	1.37
5	5	6	6000.	63.	-583.	1.73
6	6	7	13500.	75.	-600.	1.73
9999						

APPENDIX VI E

STORMWATER MANAGEMENT MODEL

RAINFALL INTENSITIES

Table E1. RAINFALL INTENSITY, SITE I

Run number 12

Time hours	cm/hr	in/hr
1355	0.69	0.27
1400	2.69	1.06
	2.69	1.06
	2.69	1.06
1430	1.80	0.71
	1.80	0.71
	1.80	0.71
1500	1.80	0.71
	1.80	0.71
	1.19	0.47
1530	1.65	0.65
	1.65	0.65
	2.64	1.04
1600	2.64	1.04
	1.17	0.46
	1.17	0.46
1635	1.55	0.61
	1.55	0.61
	2.18	0.86
1700	2.18	0.86
	1.79	0.70
	1.79	0.70
1730	1.79	0.70
	1.79	0.70
	1.07	0.42
1800	1.07	0.42
	1.07	0.42
	1.07	0.42
1830	0.33	0.13
	0.33	0.13
	0.33	0.13
1900	0.33	0.13
	0.30	0.12
	0.30	0.12
1930	0.30	0.12
	0.30	0.12

Table E2. RAINFALL INTENSITY, SITE I

Run number 16

Time hours	cm/hr	in/hr
2215	0.0	0.0
	0.61	0.24
	0.38	0.15
2230	0.15	0.06
	0.22	0.09
	0.30	0.12
2245	0.15	0.06
	0.0	0.0
	0.08	0.03
2300	0.15	0.06
	0.15	0.06
	0.15	0.06
2315	0.15	0.06
	0.15	0.06
	0.22	0.09
2330	0.30	0.12
	0.38	0.15
	0.46	0.18
2345	0.61	0.24
	0.76	0.30
	0.53	0.21
2400	0.30	0.12
	0.38	0.15
	0.46	0.18
0015	0.38	0.15
	0.30	0.12
	0.22	0.09
0030	0.15	0.06
	0.22	0.09
	0.30	0.12
0045	0.22	0.09
	0.15	0.06
	0.30	0.12
0100	0.46	0.18
	0.30	0.12
	0.15	0.06
0115	0.15	0.06
	0.15	0.06
	0.08	0.03
0130	0.0	0.0
	0.0	0.0
	0.0	0.0

Table E2 (continued). RAINFALL INTENSITY, SITE I

Run number 16

Time hours	cm/hr	in/hr
0145	0.0	0.0
	0.0	0.0
	0.0	0.0
0200	0.0	0.0
	0.69	0.27
	1.37	0.54
0215	0.91	0.36
	0.46	0.18
	0.38	0.15
0230	0.30	0.12
	0.91	0.36
	1.52	0.60
0245	0.91	0.36
	0.30	0.12
	0.22	0.09
0300	0.15	0.06
	0.08	0.03
	0.0	0.0

Table E3. RAINFALL INTENSITY, SITE I & II

Run number 21

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
1620	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
1630	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
1645	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
1700	0.13	0.05	0.30	0.12
	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
1715	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
1730	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
1745	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
1800	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
	0.25	0.10	0.30	0.12
1815	0.76	0.30	0.30	0.12
	0.76	0.30	0.30	0.12
	0.76	0.30	0.30	0.12
1830	0.76	0.30	0.30	0.12
	0.76	0.30	1.14	0.45
	0.76	0.30	1.14	0.45
1845	0.76	0.30	1.14	0.45
	0.76	0.30	1.14	0.45
	0.76	0.30	1.14	0.45
1900	0.76	0.30	1.14	0.45
	0.13	0.05	0.76	0.30
	0.13	0.05	0.76	0.30
1915	0.13	0.05	0.76	0.30
	0.13	0.05	0.76	0.30
	0.13	0.05	0.30	0.12
1930	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12

Table E3 (continued). RAINFALL INTENSITY, SITE I & II

Run number 21

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
1930	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
	0.13	0.05	0.30	0.12
2000	0.13	0.05	0.30	0.12
	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
2015	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
2030	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
2045	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
	0.08	0.03	0.13	0.05
2100	0.25	0.10	0.13	0.05
	0.25	0.10	0.13	0.05
	0.25	0.10	0.13	0.05
2115	0.25	0.10	0.13	0.05
	0.25	0.10	0.13	0.05
	0.25	0.10	0.13	0.05
2130	0.25	0.10	0.13	0.05
	0.25	0.10	0.13	0.05
	0.25	0.10	0.13	0.05
2145	0.25	0.10	0.25	0.10
	0.25	0.10	0.25	0.10
	0.25	0.10	0.25	0.10
2200	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
2215	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
2230	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
2245	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10
	0.15	0.06	0.25	0.10

Table E4. RAINFALL INTENSITY, SITE I & II

Run number 25

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
1400	0.20	0.08	0.23	0.09
	0.20	0.08	0.23	0.09
	0.20	0.08	0.23	0.09
1415	0.20	0.08	0.23	0.09
	0.20	0.08	0.23	0.09
	0.20	0.08	0.23	0.09
1430	0.05	0.02	0.23	0.09
	0.05	0.02	0.23	0.09
	0.05	0.02	0.23	0.09
1445	0.05	0.02	0.23	0.09
	0.05	0.02	0.08	0.03
	0.05	0.02	0.08	0.03
1500	0.05	0.02	0.08	0.03
	0.03	0.01	0.08	0.03
	0.03	0.01	0.08	0.03
1515	0.03	0.01	0.08	0.03
	0.03	0.01	0.08	0.03
	0.03	0.01	0.08	0.03
1530	0.03	0.01	0.08	0.03
	0.03	0.01	0.08	0.03
	0.46	0.18	0.08	0.03
1545	0.46	0.18	0.08	0.03
	0.46	0.18	0.08	0.03
	0.46	0.18	0.08	0.03
1600	0.46	0.18	0.08	0.03
	0.46	0.18	0.08	0.03
	0.46	0.18	0.08	0.03
1615	0.46	0.18	0.08	0.03
	0.30	0.12	0.08	0.03
	0.30	0.12	0.08	0.03
1630	0.30	0.12	0.46	0.18
	0.30	0.12	0.46	0.18
	0.30	0.12	0.46	0.18
1645	0.30	0.12	0.46	0.18
	0.30	0.12	0.46	0.18
	0.30	0.12	0.46	0.18
1700	0.30	0.12	0.46	0.18

Table E5. RAINFALL INTENSITY, SITE I & II

Run number 26

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
2230	0.15	0.06	0.23	0.09
	0.15	0.06	0.23	0.09
	0.15	0.06	0.23	0.09
2245	0.15	0.06	0.23	0.09
	0.15	0.06	0.23	0.09
	0.15	0.06	0.23	0.09
2300	0.38	0.15	0.23	0.09
	0.38	0.15	0.23	0.09
	0.38	0.15	0.58	0.23
2315	0.38	0.15	0.58	0.23
	0.56	0.22	0.58	0.23
	0.56	0.22	0.58	0.23
2330	0.56	0.22	0.58	0.23
	0.56	0.22	0.58	0.23
	0.56	0.22	0.58	0.23
2345	0.56	0.22	0.58	0.23
	0.56	0.22	0.58	0.23
	0.56	0.22	0.58	0.23
2400	0.30	0.12	0.61	0.24
	0.30	0.12	0.61	0.24
	0.30	0.12	0.84	0.33
0015	0.30	0.12	0.84	0.33
	0.30	0.12	0.84	0.33
	0.30	0.12	0.84	0.33
0030	0.30	0.12	3.81	1.50
	0.30	0.12	3.81	1.50
	0.30	0.12	3.81	1.50
0045	0.30	0.12	3.81	1.50
	1.52	0.60	3.81	1.50
	1.52	0.60	3.81	1.50
0100	1.52	0.60	3.81	1.50
	1.52	0.60	3.81	1.50
	1.52	0.60	1.22	0.48
0115	1.52	0.60	1.22	0.48
	1.98	0.78	0.0	0.0
	1.98	0.78	0.0	0.0
0130	1.98	0.78	0.61	0.24
	1.98	0.78	0.61	0.24
	1.98	0.78	0.61	0.24
0145	1.98	0.78	0.61	0.24

Table E5 (continued). RAINFALL INTENSITY, SITE I & II

Run number 26

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
	1.98	0.78	0.61	0.24
	1.98	0.78	0.61	0.24
0200	1.98	0.78	0.25	0.10
	1.98	0.78	0.25	0.10
	0.76	0.30	0.25	0.10
0215	0.76	0.30	0.25	0.10
	0.76	0.30	0.25	0.10
	0.76	0.30	0.25	0.10
0230	0.36	0.14	0.13	0.05
	0.36	0.14	0.13	0.05
	0.36	0.14	0.13	0.05
0245	0.36	0.14	0.10	0.04
	0.36	0.14	0.08	0.03
	0.36	0.14	0.05	0.02
0300	0.0	0.0	0.0	0.0

Table E6. RAINFALL INTENSITY, SITE I & II

Run number 27

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
2050	0.0	0.0	0.0	0.0
	0.30	0.12	0.15	0.06
2100	0.30	0.12	0.15	0.06
	0.08	0.03	0.15	0.06
	0.08	0.03	0.15	0.06
2115	0.08	0.03	0.18	0.07
	0.08	0.03	0.18	0.07
	0.30	0.12	0.18	0.07
2130	0.30	0.12	0.18	0.07
	0.30	0.12	0.18	0.07
	0.25	0.10	0.41	0.16
2145	0.25	0.10	0.41	0.16
	0.25	0.10	0.41	0.16
	0.25	0.10	0.36	0.14
2200	0.25	0.10	0.38	0.15
	0.25	0.10	0.38	0.15
	0.13	0.05	0.36	0.14
2215	0.0	0.0	0.36	0.14
	0.0	0.0	0.18	0.07
	0.0	0.0	0.0	0.0
2230	0.0	0.0	0.0	0.0

Table E7. RAINFALL INTENSITY, SITE I & II

Run number 30

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
1200	0.025	0.01	0.025	0.01
1205	0.304	0.12	0.152	0.06
1210	0.304	0.12	0.914	0.36
1215	0.304	0.12	0.050	0.02
1220	1.22	0.48	0.050	0.02
1225	1.52	0.60	1.27	0.50
1230	1.52	0.60	1.32	0.52
1235	1.52	0.60	1.37	0.54
1240	0.050	0.02	1.27	0.50
1245	0.025	0.01	0.076	0.03
1250	0.381	0.15	0.050	0.02
1255	0.254	0.10	0.025	0.01

Table E8. RAINFALL INTENSITY, SITE I & II

Run number 37

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
1650	0.0	0.0	0.0	0.0
	0.46	0.18	0.23	0.09
1700	0.46	0.18	0.23	0.09
	0.41	0.16	0.23	0.09
	0.41	0.16	0.23	0.09
1715	0.41	0.16	1.52	0.60
	0.41	0.16	1.52	0.60
	0.41	0.16	0.15	0.06
1730	0.41	0.16	0.15	0.06
	1.52	0.60	0.76	0.30
	1.52	0.60	0.76	0.30
1745	1.83	0.72	0.46	0.18
	0.61	0.24	0.46	0.18
	1.07	0.42	2.29	0.90
1800	1.07	0.42	2.29	0.90
	0.30	0.12	0.46	0.18
	0.30	0.12	0.46	0.18
1815	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
1830	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
1845	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
1900	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
1915	0.25	0.10	0.10	0.04
	0.25	0.10	0.10	0.04
	0.41	0.16	0.10	0.04
1930	0.41	0.16	0.10	0.04
	0.41	0.16	0.10	0.04
	0.41	0.16	0.10	0.04
1945	0.38	0.15	0.0	0.0
	0.38	0.15	0.0	0.0
	0.36	0.15	0.0	0.0
2000	0.36	0.14	0.0	0.0
	0.33	0.13	0.0	0.0
	0.33	0.13	0.0	0.0

Table E8 (continued). RAINFALL INTENSITY, SITE I & II

Run number 37

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
2015	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
2030	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
2045	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.05	0.02	0.0	0.0
2100	0.05	0.02	0.0	0.0
	0.05	0.02	0.41	0.16
	0.05	0.02	0.41	0.16
2115	0.05	0.02	0.41	0.16
	0.05	0.02	0.41	0.16
	0.05	0.02	0.41	0.16
2130	0.05	0.02	0.41	0.16
	0.05	0.02	0.41	0.16
	0.30	0.12	0.41	0.16
2145	0.30	0.12	0.15	0.06
	0.30	0.12	0.15	0.06
	0.30	0.12	0.15	0.06
2200	0.13	0.05	0.15	0.06
	0.0	0.0	0.15	0.06
	0.0	0.0	0.15	0.06
2215	0.0	0.0	0.0	0.0

Table E9. RAINFALL INTENSITY, SITE I & II

Run number 45

Time hours	Site I		Site II	
	cm/hr	in/hr	cm/hr	in/hr
1230		0.0	0.0	0.0
	1.82	0.72	0.0	0.0
	1.82	0.72	0.0	0.0
1245	0.53	0.21	0.0	0.0
	0.53	0.21	0.0	0.0
	0.53	0.21	0.0	0.0
1300	0.53	0.21	0.07	0.03
	0.0	0.0	0.07	0.03
	0.0	0.0	0.0	0.0
1315	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
1330	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
1345	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.10	0.04
1400	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
1415	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.05	0.02
1430	0.25	0.10	0.38	0.15
	0.25	0.10	0.38	0.15
	0.25	0.10	0.38	0.15
1445	0.25	0.10	0.38	0.15
	0.25	0.10	0.38	0.15
	0.25	0.10	0.0	0.0
1500	0.25	0.10	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
1515	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
1530	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0
	0.0	0.0	0.0	0.0

APPENDIX VI F

STORMWATER MANAGEMENT MODEL

REMAINING CSO AREA DATA

80-80 CARD TO PRINT PROG#4106

```
WATERSHED
RACINE, WISCONSIN *****REMAINING COMBINED SEWER AREAS ALONG THE ROOT RIVER
  PREPARED BY THE ENVIRONMENTAL SCIENCES DIVISION OF ENVIREX
    8   100 1015   5.0     3
   40  5.0
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .01
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .01
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .20
  .20   .20   .20   .20   .20   .20   .20   .20   .20   .01
    2    70    20 2400.  27.4   60.
    2    71    30 2100.  30.1   60.
    2    80    40 1218.   5.4   60.
    3    91    50 1760.  10.4   15.
    3    92    60 4570.  13.4   90.
    3    93    71 1314.   5.7   90.
    3    94    82 158.   15.0   10.
    3    95    92 260.   58.9   90.
    3    96    91 098.   14.5   65.

    2    16    20     2     1.0    420.   .0066     0.0     0.0    .013     12.
    2    21    30     2    3.67    420.   .0182                    .014
    2    22    30     2    1.25   1200.   .0088                    .014
    2    33    40     2     1.0    220.   .0083                    .014
    2    43    50     2    0.67    194.   .010                     .014
    2    41    50     2    1.25    347.   .010                     .014
    2    53     7     2    2.00   1234.   .042                     .014
    2    54     7     2    2.5      10.   .010                     .014
    2    61     8     2     1.0    870.   .0096                    .014
    2    71    14     2     1.0    287.   .011                     .014
    2    72     9     2     1.0    360.   .0248                    .014

    8
```

80-80 CARD ID PRINT PROG.#9105

```
  20    30    40    50    60     7     8     9
   3     6
  20     7     9
   2
  30    40
   9     8   5.0    10    15   100
      13.0          14.     1
 1.5                150.         375.
  70    20     1          27.4          4.2
  71    30     1          30.1         14.4
  80    40     1           5.4          .22
  91    50     5          10.6          .61
  92    60     4          14.4         12.9
  93     7     4           5.7          3.3
  94     8     2          15.0          2.7
  95     9     4          56.9         16.7
  96     9     3          14.5          4.6
TRANSPORT

1 TRANSPORT FOR HYPOTHETICAL STORM PREPARED BY ENVIREX INC.
  96   100     8     1     4     4     0     3     4
       300.                      30.
    1     1     1     1
   3 363           0  16
   4 348     0     0  16
   5 335     0     0  16
   6 326     0     0  16
   7  53   354     0  16
   8  61     0     0  16
   9  73     0     0  16
  10 381     0     0  16
  11 329     0     0  16
  12 404     0     0  16
  14  71     0     0  16
  15   0     0     0  16
  20  16     0     0  16
  30  21   322     0  16
  40  33     0     0  16
  50  41   343     0  16
  60 351     0     0  16
```


Reproduced from best available copy.

80-80 CARD TO PRINT PROG#9106

206	0	0	0	16			
301	0	0	0	16			
303	302	0	0	16			
305	304	0	0	16			
307	306	0	0	16			
309	308	0	0	16			
311	310	312	0	16			
313	314	0	0	16			
317	0	0	0	16			
318	315	319	0	16			
320	0	0	0	16			
323	0	0	0	16			
330	0	0	0	16			
332	331	0	0	16			
340	0	0	0	16			
344	0	0	0	16			
346	345	0	0	16			
350	0	0	0	16			
358	359	0	0	16			
362	0	0	0	16			
370	0	0	0	16			
376	375	0	0	16			
378	377	0	0	16			
401	400	0	0	16			
403	402	0	0	16			
409	408	446	0	16			
443	442	441	0	16			
445	365	444		16			
16	317	0	0	1	420.	1.00	.66
21	318	0	0	1	418.	3.67	1.82
22	323	0	0	1	1200.	1.25	0.88
33	332	0	0	1	220.	1.0	0.83
41	340	0	0	1	347.	1.25	1.0
43	344	0	0	1	194.	0.67	1.0
53	60	0	0	1	1234.	2.0	4.2
61	362	0	0	1	870.	1.0	0.94
54	15	0	0	1	10.	2.5	1.0
71	370	0	0	1	280.	1.0	1.1
73	14	0	0	1	360.	1.0	2.46
302	301	0	0	1	265.	1.0	.66

Reproduced from best available copy.

80-80 CARD TO PRINT PROG#9106

304	303	0	0	1	276.	1.25	.66	
306	305	0	0	1	300.	1.50	.50	
308	307	0	0	1	240.	1.50	.30	
310	309	0	0	1	146.	3.00	.10	
312	313	0	0	1	507.	1.50	.50	
314	20	0	0	1	137.	1.25	.66	
315	311	0	0	1	319.	3.0	1.82	
319	320	0	0	1	1000.	.83	0.60	
324	30	0	0	1	321.	3.67	1.82	
325	324	0	0	18		8.6		324.
326	325	0	0	1	75.	5.0	2.0	
329	329	0	0	1	10.	10.0	3.0	
331	330	0	0	1	375.	0.83	0.77	
335	40	0	0	1	40.	2.5	1.7	
345	50	0	0	1	382.	1.25	1.0	
347	346	0	0	1	102.	1.50	1.2	
348	407	0	0	1	200.	3.50	2.0	
351	350	0	0	1	1051.	1.25	4.0	
355	7	0	0	1	19.	2.5	0.9	
356	355	357	0	18		6.		365.
357	358	0	0	1	521.	1.5	2.9	
359	8	0	0	1	209.	1.25	0.53	
363	356	0	0	1	280.	1.25	6.1	
365	356	0	0	1	500.	2.5	0.66	
375	9	0	0	1	130.	1.5	4.1	
377	376	0	0	1	100.	2.25	4.1	
379	378	0	0	1	272.	2.5	3.7	
380	379	0	0	18		12.		442.
381	380	0	0	1	100.	2.5	3.7	
400	11	0	0	1	2976.	2.5	.083	
402	401	0	0	1	1445.	2.5	.083	
404	403	0	0	1	2076.	3.0	.090	
406	12	0	0	1	1280.	3.25	.090	
407	406	347	0	18		15.0		408.
408	407	0	0	1	3000.	3.25	.09	
441	206	0	0	1	1146.	3.25	.083	
442	380	0	0	1	10.	6.0	3.0	
444	443	0	0	1	2000.	3.5	.09	
446	445	0	0	1	100.0	20.0	.1	
	3	4	5	6				

80-80 CARD TO PRINT PROG#9106

```
  7
  3    4    5    6
  100.     25.    500.
298      0.0      6.0
 11    24   112   397   795 1184 1302 1117  961  606  335  100
    .851      1.033      1.109      1.116      1.092      1.096      .937
     1.0        1.0        1.0        1.0        1.0        1.0        1.0
     1.0        1.0        1.0        1.0        1.0        1.0        1.0
     .74        .67        .63        .59        .54        .56        .67        .96
    1.42       1.19       1.20       1.15       1.17       1.11       1.08       1.15
    1.21       1.23       1.25       1.21       1.17       1.15        .88       1.07
     .85        .71        .60        .41        .46        .49        .72        .87
     .77       1.57       1.02        .87        .91        .94       1.07       1.07
    1.14        .99       1.45       1.16       1.55       1.29        .99       1.60
    1.05       1.05       1.10        .50        .66       1.33       1.10        .88
    1.03        .91        .66        .63        .94        .94       1.05       1.05
    1.16        .94       1.33       1.22       1.44       1.10        .88       1.05
    1.10        .64        .45        .87        .54        .48       1.29       1.18
    1.37       1.49       1.30       1.12        .89        .58        .45        .67
     .96       1.18        .84       1.01       2.82       1.77        .84        .71
  9    1    5    1   10   15                   1.32
    7.04       80.0       121.   2.72E07
  95.2     82.0     14.5      5.8     74.2                1.0     10.6
  11        2.5      80.0      121.
  12       0.45      80.0      121.
 206        4.1      80.0      121.
  14       0.22      40.0      242.
  15        2.6      80.0      121.
70  212                 27.4   17. 160.  3.4        3.
71  312                 30.1   17. 150.  3.4        3.
80  412                  5.4   40.  36.  3.4        3.
91  552                 10.6                                3.1   2.0 121.
92  642                 19.4                                0.7   6.0 110.
93  742                  5.7
94  822                 15.0    8.  38.  3.4        3.
95  942                 56.9                                3.47 13.0 160.
96  932                 14.5
ENDPROGRAM
//
```